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# LANDSCAPE ARCHITECTURE AND ART

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# **LANDSCAPE ARCHITECTURE AND ART**

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## INTRODUCTION

Our scientific magazine marks another anniversary – 20 and 2022. A numerology that makes you assess what have been done and encourages you to look forward. Our Latvia University of Agriculture also gets a new name – the Latvia University of Life Sciences and Technologies. A name that makes it clear that the early 21<sup>st</sup> century is taking higher education by the rapid leaps towards new achievements.

Looking back is a research topic that appears in the work of several authors. Cultural and historical values.

Perhaps the developments in the political sphere of the world are forcing a re-examination of the values that civilisation leaves behind. One of them is a devastating war in Ukraine, which claims human lives and destroys the treasures of art accumulated over centuries in painting, sculpture and architecture.

The study of cultural space influenced the majority of publications.

Livonian times and the beginning of the restoration of Dobeles Castle ruins. Giant boulder walls, their rubble and reinforcement, restoration of disintegrated lime mortar, armouring of walls and reinforcement of metal anchors. The amount of work to be carried out to restore the cultural artefact is impressive.

No less worrying is the issue of the closure of small rural schools located in former manor houses. This autumn, the parish primary school is leaving the centre of Laidu Manor. The restoration of the interior of the building has begun, and one of the rooms has had its ceiling painting restored. If a building loses its occupancy, the rooms are not heated and ventilated. They gradually become overwhelmed by damp, condensation and mould. Rural municipalities have very little funding to ensure the functionality of large buildings. The manor house of Laidu Manor has preserved its historic wooden windows and stoves. Replacing them requires a huge amount of money.

The study of the 18<sup>th</sup>/19<sup>th</sup> century estate parks in Tsarist Russia is impressive. The park was to serve as a kind of meditation form in response to scientific progress and social upheaval in the 18<sup>th</sup> century. Art as an impulse for creative understanding. The elements of the garden, its rhythm and symbols were subordinated to the emotional experience, combined with elements of poetry, travel motifs and impressions of the past, uniquely combined in their dynamics and structured in figurative representations. A visitor of the park had to have a bundle of knowledge demonstrating the understanding of architecture, painting, poetry, music and philosophy.

In the early 21<sup>st</sup> century, however, the possibilities of technology demonstrate a broader spectrum. This is especially true for the urban space, where night lighting achieves a very impressive compositional synthesis of both historic buildings

## PRIEKŠVĀRDS

Mūsu zinātnisko rakstu žurnāls iezīmē kārtējo jubilejas skaitli – 20 un 2022. gads. Ciparoloģija, kas liek izvērtēt padarīto un rosinoši raudzīties uz priekšu. Arī mūsu Latvijas Lauksaimniecības universitāte iegūst jaunu nosaukumu – Latvijas Biozinātņu un tehnoloģiju universitāte. Nosaukums, kas skaidri norāda, ka 21. gs. sākuma posms milzu soļiem augstāko izglītību ved pretim jauniem sasniegumiem.

Atskatīties uz bijušo ir pētījumu tēma, kas parādās vairāku autoru darbos. Kultūrvēsturiskās vērtības. Iespējams, ka notikumi pasaules politiskajā laukā liek vēlreiz pārskatīt vērtības, kuras civilizācija atstāj aiz sevis. Viens no tiem ir postošā kara darbība Ukrainā, kas nesaudzē ne cilvēku dzīvības, ne gadsimtos uzkrātās mākslas vērtības glezniecībā, tēlniecībā, arhitektūrā.

Kultūrtelpas izpēte ir skārusi lielāko publikāciju daļu. Livonijas laiks un Dobeles pilsdrupu atjaunošanas darbu aizsākums. Milzu laukakmeņu mūri, to nodrupumi un pastiprinājumi, izbirušās kaļķu javas atjaunošana, mūru armējumi un metāla enkuru nostiprināšana. Iespaidīgi darbu apjomi, kas veicami kultūrvietas atgūšanai.

Ne mazāk rūpju raisa problemātika, kas saistāma ar mazo lauku skolu slēgšanu, kas izvietojas bijušajās muižu kungu mājās. Šoruden Laidu muižas centru atstāj pagasta pamatskola. Ēkā ir aizsākusies iekštelpu restaurācija, un vienai no telpām ir veikta griestu apgleznojuma atjaunošana. Ja ēka zaudē apdzīvotību, tad telpas netiek apkurinātas un vēdinātas. Pamazām tās pārņem mitrums, kondensāts un pelējums. Lauku pašvaldību finansējums ir ļoti zems, lai nodrošinātu lielu ēku funkcionalitāti. Laidu muižas kungu mājai ir saglabājušies vēsturiskie koka logi un krānsis. To nomainībai ir nepieciešams milzum daudz līdzekļu.

Iespaidīgs ir pētījums par 18./19. gs. muižu parkiem cariskajā Krievijā. Parkam bija jākalpo kā sava veida meditācijas formātam, kas bija reakcija uz zinātnes progresu un sociālo satricinājumu 18. gs. Māksla kā impulss radošajai sapratnei. Dārza elementi, tā ritms, simboli bija pakārtoti emocionālajai pieredzei, apvienots ar dzejas elementiem, ceļojumu motīviem un pagātnes iespaidiem, kas unikāli apvienoti savā dinamikā, un strukturēts figurālos attēlojumos. Parka apmeklētājam bija jābūt ar zināšanu krājumu, kas apliecinātu viņa sapratni par arhitektūru, glezniecību, dzeju, mūziku un filozofiju.

Savukārt, 21. gs. sāk. tehnoloģiju iespējas demonstrē plašāku spektru. Īpaši tas ir attiecināms uz pilsētelpu, kurā ar nakts izgaismojumu tiek panākts ļoti iespaidīgs gan vēsturiskās apbūves, gan modernās arhitektūras kompozicionāla sintēze. Spilgts piemērs ir Liepāja. Koncertzāle, kura naktīs mirdz kā milzu



and modern architecture. Liepaja is a remarkable example. A concert hall that glows at night like a giant orange piece of amber, having found a perfect harmony with the historic buildings of the city. It is a very impressive science of lighting technology that can virtually hold centuries together.

Other studies also show that the application of modern technologies, both in the renovation of cultural space and in the latest trends in architectural forms, is a tool in the hands of professionals to bring green thinking more and more confidently into the everyday life of society.

Taken together, this shows that the change of name of our university marches confidently towards the application of modern technologies.

oranžs dzintara gabals, perfekti atrodot harmoniju ar pilsētas vēsturiskās apbūves daļu. Tā ir ļoti iespaidīga apgaismojuma tehnoloģiju zinātne, kas virtuāli spēj saturēt kopā gadsimtus.

Arī pārējie pētījumi pierāda, ka moderno tehnoloģiju pielietojums gan kultūrtelpas atjaunošanā, gan jaunākās arhitektūras formveides tendencēs, ir instruments speciālistu rokās, lai zaļā domāšana ienāktu aizvien pārliecinošāk sabiedrības ikdienā.

Minētais kopumā pierāda, ka mūsu universitātes nosaukuma maiņa iet pārliecinoši pretim moderno tehnoloģiju pielietojumam.

**Aija Ziemeļniece**  
Editor in Chief

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# Identity of historical areas of a city: interaction between nature and man



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**Abstract.** The article discusses the preservation of urban peculiarity, visual uniqueness and cultural identity in the world affected by globalisation processes. First of all, the urban identity as such is discussed, a study of literary sources helps identify factors that shape urban identity. Tangible and intangible factors are distinguished. Second, in order to reveal the problems of identification and fostering of the identity of historical parts of cities and to verify the urban identity shaping methodology described in this article, historical suburbs of Vilnius in the southeast part of the Old Town are analysed in detail. The performed research of peculiarities of the urban fabric of the historical suburbs has showed very vividly that both the man made physical environment and the features of the natural environment present are significant for urban identity. In the studied suburbs, expressive terrain, also a river and its valley play a significant role for the formation and identity of a place. Man made built-up, ensembles, street routes and even the built-up function adapted to natural conditions. The close interaction between natural conditions and human activities has led to the identity of these historical territories. It is noted that urban identity should not be perceived as unchanging – it is a process that is shaped rather deliberately. Urban design, architecture and landscape architecture are activities that help create urban identity.

**Keywords:** natural environment, man made environment, urban identity, historical suburbs, Vilnius

## Introduction

In the context of the globalization process worldwide, more and more attention is paid to the preservation of the urban peculiarity, visual uniqueness and cultural identity. Urban identity is a complex, multi-layered set of features that a city acquired gradually, consistently developing in the course of history. The history of urbanism reveals that urban identity formed naturally, spontaneously, as a result of local processes [5]. Achievements in various fields, industrialisation and globalisation have created new opportunities for urban development, but at the same time also produced certain universal features that have led to similarity of cities [3]. Therefore, recently, the urban discourse has seen a comeback, in a broader sense, of certain notions of natural and cultural phenomena that were pushed into the margins of academic research during the period of the flourishing of modern scientific worldviews. One of them is the urban identity. It is not enough for a harmonious city to meet globalisation requirements, it is equally important to meet the higher socio-cultural needs of urban users. Thus, the issue of urban identity is becoming more and more relevant, as modern urbanism and architecture face the challenge how to preserve urban identity, at the same time meeting the contemporary needs of a global society.

Vilnius, as many post-socialist cities, sees a dual trend in urban development – almost uncontrolled urban sprawl and intensive construction in the central part of the city and even in some of its historical core. Construction in the city centre creates a tension between the trends of the new built-up and fashions affected by the globalisation

phenomenon and the survival of the urban heritage values. The article briefly touches upon the impact of globalization on the similarity of cities. A study of literary sources allows to highlight factors that shape urban identity. Theoretical ideas and hypotheses are illustrated with the results of the research of identity of historical parts of Vilnius city. The authors note that both man made physical environment and features of the existing natural situation are significant for urban identity.

## Impact of globalisation on urban identity change

Globalisation in a general sense is a complex phenomenon that covers a wide range of areas, such as economy, culture, social life, politics, and forms the worldview of at least the last fifty years. The attitude to the phenomenon of globalisation is dual: on the one hand, it is an inevitable consequence of the processes of technological progress, which brings economic and political benefits. On the other hand, globalisation leads to deterioration of local, traditional cultures [9]. Three waves of globalisation are distinguished, which were determined by certain fundamental changes in the society [26]:

- 1) the first industrial revolution (the 19<sup>th</sup> century to 1914) – standardization of the production process;
- 2) urbanisation (period after WW2) – urban development due to the demographic boom;
- 3) the third industrial revolution – rapid technological development, development of new communication technologies, computerisation.

These achievements, on the one hand, have led to the progress of humanity, on the other hand, they

triggered the emergence of a global culture that diminished the importance of local cultures. According to R. Robertson who researched the globalisation phenomenon, globalisation happens when a larger and stronger culture meets a weaker one. Meeting of global influences with local traditions leads to certain changes in local culture, levelling [21]. Increased mobility allows one to feel the spatial closeness and this affects not only the contraction of space and time, but also the homogenisation of cultures. Places that are far away from each other become easily accessible and, in the long run, culturally close. The possibilities of closeness in the context of globalisation lead to the emergence of uniformity – for the first in history, the world becomes a unified social and cultural environment [5].

Globalisation affects different spheres of life, architecture and urban environment are not an exception. As a result of the first and second waves of globalisation, an international style formed in architecture that existed from 1925 to 1965. This architectural style was characterized by the application of universal, homogeneous principles in architecture and urban planning. Realising the influence of global culture, M. McLuhan said in 1962 that “electro-magnetic discoveries have recreated the simultaneous ‘field’ in all human affairs so that the human family now exists under conditions of a ‘global village’” [17]. Globalization also promotes the economic growth of cities and urban competition in the areas of urbanism and architecture. As a result of competition, cities see rising of skyscrapers, which have little to do with urban identity [8].

The critical awareness of the consequences of globalisation for cities has led to the emergence of a movement contrary to the international style – critical regionalism. The main idea of this movement is that local culture is not an unchanging given, but rather a deliberately shaped phenomenon. The survival of authentic cultures depends on our ability to preserve the essential forms of regionalist culture, while at the same time mastering the benefits of global culture. A key feature of critical regionalism is a contextual approach to the environment. The architecture that reflects the ideas of critical regionalism is created taking into account the local features – urban context, topography, local materials, history and other features characteristic of a place [8].

As the article is illustrated with a study of the historical parts of the city of Vilnius, it is worth noting that in Lithuania globalisation processes began much later than in Western Europe. The less developed economy has led to a slower urbanization of Lithuanian cities, therefore architectural movements that prevailed in Western Europe and

were linked to the deterioration of urban identity caused by globalisation, have largely not taken hold in Lithuania. The identity of Lithuanian cities was most broken by modernist urban planning, which applied typical, universal features of urban planning and architecture. As a response to the typical modernist architecture and urban planning of the second half of the 20th century that were destroying identity, examples of contextual urbanism were being created – one of them is the Lazdynai district project (architects V. Brėdikis, V. E. Čekanauskas, 1964–1967). The humane approach to nature, organic character, the search for the optimal scale were opposed to the then prevailing typical urban planning [16].

### **Factors that shape urban identity**

As it has been mentioned, the problem of urban identity is becoming more and more relevant, as modern urbanism and architecture face the challenge how to preserve the local spirit but at the same time to achieve the result that meets the needs of a modern global society. The main idea of critical regionalism, which has been already discussed, and of other movements, which were aware of the negative influence of globalisation on the physical form of cities, is shaping and fostering of urban identity.

Identity is a multi-layered, complex phenomenon, characteristic of various fields of activity. Various definitions of this phenomenon are found in literature: in a general sense, it is a set of features of any system that sets it aside from other systems [14]. However, it is recognized that the concept of identity, given the multi-layered and interdisciplinary character of this phenomenon, is still not understood in the same way. The modern definition of identity first started to be used in social sciences in the middle of the 20th century. This concept was related to the interpretation of personality identity and described different social groups distinguished by certain features – belonging to ethnic, political, cultural and similar groups [10]. The importance of identity was soon realized not only in social but also in other sciences and the importance of the physical environment for the perception of identity of a person started to be discussed [5]. The identity of a place, according to this interpretation, must be shaped as a socio-cultural dimension, in which a person (community) can identify himself (itself) [12].

A similar approach to shaping of urban identity is revealed by Ch. Alexander and co-authors, who note factors shaping urban identity of a territory – continuity, uniqueness, significance, compatibility, cohesiveness [1] (Figure 1). The authors emphasize that these factors apply not only to urban fabric and the expression of its physical form but also to the



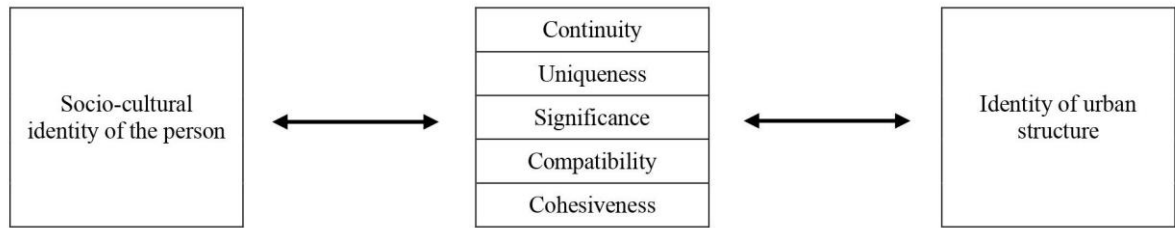


Fig. 1. Factors shaping the urban identity of a territory and socio-cultural identity of the person [prepared by the authors referring to [1]]

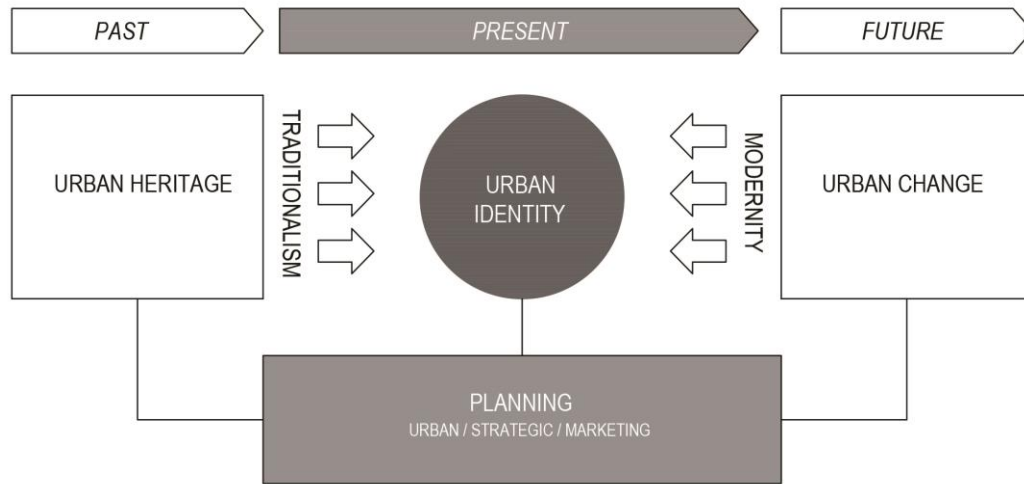


Fig. 2. Urban identity as a tool for urban planning and urban design [5]

resident of that place, i.e. how he identifies himself in a particular urban structure [12]. It is emphasized that identity shaping factors can be applied not only in urban planning, creating a physical form of the environment, but also in the field of social sciences. According to the author, identity of a place can be formed only if cooperation of these two areas is ensured [12].

In a deeper perspective, urban identity can be perceived not as a physical dimension allowing persons or communities to self-identify, but also as a distinct phenomenon characterizing the urban structure, which formed in the long-term development of the urban structure [5]. Urban identity, in this regard, describes the uniqueness of the city itself or its part in the context of other cities (their parts). Modern perception of identity of physical structure of the city is linked to the definition of genius loci that goes back even to the times of the Ancient Rome. Genius loci (Latin) is a protective spirit that accompanies a person throughout his life and determines the character and destiny of the person. This spirit protected not only people but also cities [19]. The modern concept of the local spirit came from this myth of the Ancient Rome. According to C. Norberg-Shulz, a place is

a space with a certain character. The local spirit is the intangible characteristic of a space, which makes it a place, and architecture is a means of highlighting the local spirit [19]. The works of C. Norberg-Schulz drew a line between the abstract space which is not present anywhere but exists at the same time and the specific expression of such a space that is perceived by use of senses in a certain place, which can be identified and described, distinguished from other places referring to certain characteristics that are specific only of that place [22]. Ph. Sheldrake, English researcher of place, memory and city creation issues, says: “<...> the ‘World’ is not simply a neutral collection of raw data but is something we interpret and to which we give meaning. <...> ‘Place’ is a fundamental category of the way we experience our human existence. <...> ‘Place’ is interpreted space defined in relation to communities of people or to human significance more broadly” [23]. It can be said that urban identity becomes a tool for contextual but inevitable urban changes (Figure 2).

In terms of the concept of urban identity, it is important to identify the definition of city image and the differences between these two concepts. The concept of city image is associated more with the

TABLE 1

Factors that shape urban identity [prepared by the authors referring to 24; 27]

Factors that shape urban identity		
Tangible		Intangible
Natural	Anthropogenic	
<ul style="list-style-type: none"> <li>▪ Climate</li> <li>▪ Geography</li> <li>▪ Topography</li> <li>▪ Hydrography</li> <li>▪ Vegetation</li> <li>▪ Surface materials and textures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Network of streets</li> <li>▪ Land holdings: boundaries of possessions, land use types</li> <li>▪ Public urban spaces and their systems (squares, green squares, parks, gardens)</li> <li>▪ Built-up: buildings (their form, scale, details), building complexes, built-up structure</li> <li>▪ Archaeological sites</li> <li>▪ Monuments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Historical events, commemorations, celebrations, festivals</li> <li>▪ Traditional culture</li> <li>▪ Religion (myths, rites, beliefs)</li> <li>▪ Traditional practices (crafts, local construction traditions)</li> <li>▪ Value system</li> <li>▪ Rules (legal regulation, customs)</li> <li>▪ Economy</li> </ul>

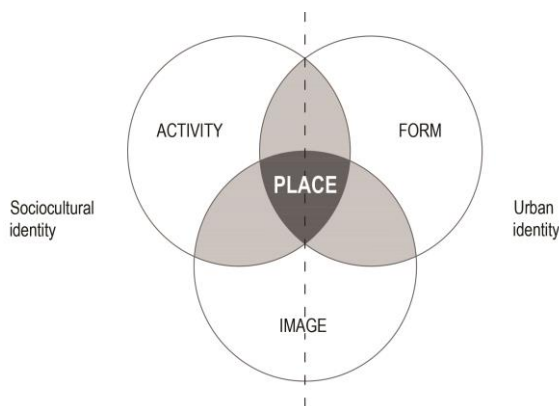


Fig. 3. Groups of identity shaping factors [prepared by the authors referring to [4, 18]

impact of the physical form of the city on the external environment, while urban identity is a phenomenon that shapes the internal structure of the city. Urban identity is a more complex phenomenon than city image [11], because it covers not only the physical form of the city, but also the intangible aspects of the perception of the city.

The modern concept of urban identity is based on identification of identity shaping factors [5]. Literature highlights various factors that shape the identity of the area, including land management schemes, especially those formed at an early stage of development, types of architectural objects, the structure of the local economic system, features of the natural environment, topography of the area, main transport corridors and/or accesses to the business districts in the city centre and elsewhere, also important sights [20]. Thus, identity should be perceived not only as certain features of the physical form of the urban fabric, but also as meanings that arise in the historical development of the city. In summary, the identity of the urban structure is mostly shaped by its physical form – built-up that creates certain space parameters and an exceptional atmosphere [19]. However, in addition to physical factors, intangible factors must also be pointed out – history, traditions, culture, memory and other

subjectively perceived features inherent in development of the city [13].

This interpretation is basically supported by John Montgomery [18] as well, by highlighting three factors that shape local identity – activity, form, and image (Figure 3). It can be said that activity shapes urban identity through certain sociocultural tools, the image is certain meanings that are important not only for the physical formation of the form of the city, but also for its recognition, while the form is the formation of urban fabric – the field of activity for architects and urbanists.

In summary, it can be stated that literature distinguishes tangible and intangible factors that shape urban identity. Tangible factors are further divided into natural (topography, geography, hydrography, vegetation and other natural features of the territory) and artificial or anthropogenic (all man made physical forms – built-up, network of streets, public spaces and their systems, land holdings, parks, gardens, etc.). These tangible factors can be assessed physically and they often become the main tools of urban design. Since the city is not merely a physical form, intangible factors that shape identity are equally important: various historical events, commemorations, celebrations, festivals, religious rites related to a place, certain values, rules and the like prevailing in that territory [24; 27] (Table 1).

#### Identity of Vilnius historical areas: interactions between natural and anthropogenic structures

In order to reveal the problems of identification and fostering of the identity of historical parts of cities and to verify the urban identity shaping methodology described in this article, historical suburbs of Vilnius in the southeast part of the Old Town are analysed in detail. The historical suburbs of Vilnius have been examined at both the general city level and at local levels. At the general city level, the role and specificity of historical suburbs in

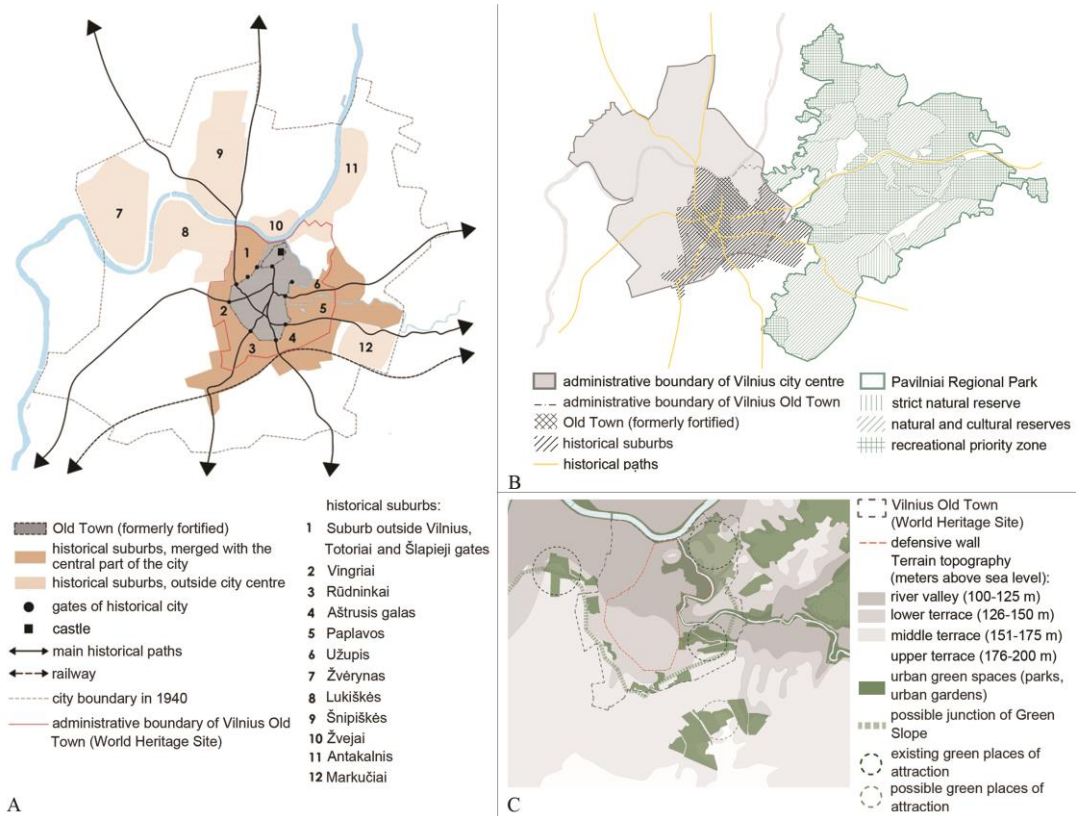


Fig. 4. Historical suburbs of Vilnius in the urban structure of the city: A – location of historic suburbs; B – interaction between the Pavilniai Regional Park and the city centre; C – natural situation of historic suburbs [7, 25]

the urban structure of the central part of the city are determined. Conclusions of the urban analysis of this level can in the future lead to proposals for alternative development of Vilnius historical suburbs. On the local scale, urban structures of individual historic suburbs are examined, individual features of the urban structure of each suburb are sought, on the basis of which regulations for built-up of the suburbs can be proposed.

#### Structure of Vilnius historical core: the city and its suburbs

The structure of the Vilnius layout and space is an example of a naturally emerged organism of a city, with almost all traces of its development visible. The city layout formed in an organic way, its structure was mainly determined by roads and topographical conditions. As the Vilnius city street network developed according to the principle of natural adaptation, city blocks of various shapes came into existence, a large majority of which are in the form of an elongated irregular rectangle and triangle. At the beginning of the 16th century (1503–1522), the core of the city, limited by water bodies, was surrounded by a defensive wall. The wall affected the development not only of the city layout – streets leading to the gates in the wall acquired greater significance in the city layout.

It significantly changed the volumetric and spatial composition of the city. The built-up in the territories within the walls was getting denser, the walls and gate towers added to the panorama. This part of the city kind of separated from the rest of the territory, acquired the nature of a fortress, began to dominate the valley, especially since it contained the main accent – the Upper Castle.

Even before the city was surrounded by the wall, suburbs were already growing near the main roads to the city. The suburbs were different from the city centre by their built-up characteristics, but Vilnius is special because its closest historical suburbs have grown into one with the core of the old city – sometimes it is even difficult to draw a line between them. It is more pronounced only where natural obstacles still exist to this day. But these natural barriers do not separate the suburbs from the city context. These boundaries often connect different parts of the city rather than separate them (Figure 4 A) [7].

#### Peculiarities of natural morphostructure of the historical core of Vilnius

The uniqueness and exclusivity of the townscape of the city of Vilnius and particularly of its historical core – the Old Town and historical suburbs surrounding it – is determined by the very rich

diversity of the natural environment and the harmony of urban fabric and natural context. The valleys and slopes of the Neris and Vilnia rivers, green pine woods form a valuable landscape that shapes a characteristic multi-faceted townscape of Vilnius city. The Neris migration corridor of national importance is a structural part of the natural framework of Vilnius that has various significance for the urban composition in different parts of the city. In the centre of the city, the Neris valley has lost its protective-ecological compensatory function that is important for the natural areas of the framework. However, the wide observation field of the valley that is visible from the Gediminas Castle Hill – the most important semantic landmark and compositional centre of the Old Town of Vilnius – identifies the uniqueness of the city of Vilnius [6]. According to landscape architects I. M. Daujotaitė and G. M. Laukaitytė-Malžinskienė, only those cities that have preserved the old town and natural topographic heritage remain distinctive and interesting [6]. The topographic heritage of the city is one of the most important natural factors determining the development of urban structure, and not only the structure of its greenery but also the characteristic diversity of the spatial structure of the townscape and the peculiarity of the view [2].

The natural basis has determined not only the unique position of the historical suburbs in relation to the Old Town, but also the formation of the urban character of these structures. The analysis of the natural and urban situation of the historical suburbs shows the dependence between the natural basis of the historical suburbs and the character of the built-up. The suburbs that are in the middle of the current central part of the city (the suburb outside Vilnius, Totoriai and Šlapieji gates and Vingriai suburb), which formed in the lower terrace of the Neris river valley, have undergone a smaller influence of the natural framework, acquired the urban fabric characteristic of the city centre, harmoniously integrated into the urban structure of the central part of the city and the signs of the former existence of the historical suburbs are scarce here. Meanwhile, the historical suburbs in the southeast part of the Old Town (Aštrusis-Subačius suburb, Užupis, Paupys) are affected by natural formations more than by the urban development of the city centre. These suburbs, being in the zone of influence of the Pavilniai Regional Park, which is a part of the active natural framework, were less urbanized in the long term due to the complicated topographic conditions, and the natural element remained more active there, with the characteristic sensitive interaction between the natural and urbanized environment. Therefore, in the formation of the urban fabric of the historical suburbs in the zone of influence of the Pavilniai Regional Park, the distinctiveness of the

territories can be revealed by creating connections with the natural surroundings of the Pavilniai Regional Park (Figure 4 B, C).

#### *Elements of the urban identity of Vilnius historical suburbs*

One of the main factors that led to the peculiarities of structures of the historic suburbs in the southeast part of the Old Town is the natural conditions for the formation of the historical suburbs. The historical suburbs of Vilnius are located on green hills, embracing the historic core of the city, which finds itself in kind of a bowl, the church towers – the unique dominant elements of the architecture – appear on the green background of low hills [15]. Thus, the topographical situation of Vilnius historic suburbs is unique in that the boundary of the upper terrace of the Neris valley, which runs through their territories, frames the historical core of the city and gives the territory the exposition possibilities.

The Old Town is surrounded not only by slopes, but also by important natural objects of attraction in the city – the Kalnai Park, the Bernardine Garden, the Kūdras Park, the Missionary Gardens in the eastern part of the Old Town and the Reformatai Square, the Cvirka Square, the Tauras Hill in the western part. The system of these local natural elements is complemented by the Belmont Forest area and the Vingis Park. These green zones of attraction on different sides of the Old Town connect along the defensive wall of the city, in the place of the former defensive bulwark, but the green connection is not sufficiently formed. Study of the experience of other cities has allowed to notice that one way to form a structural boundary between the old town and historical suburbs is to create green public urban spaces outside the defensive wall in the place of the former defensive field. In the case of Vilnius, local public spaces could be formed outside the former city gates, thus giving meaning to the boundary between the historical suburbs and the Old Town and creating a connection between natural objects of attraction in the east and in the west, which surround the Old Town.

The topographic basis has led to the unique significance of the historical suburbs for the volumetric spatial composition of the Old Town. As already mentioned, the historical suburbs are located on the green slopes surrounding the historical core, thus forming the background for the Old Town panoramas. In addition, the main compositional core of the historical suburbs – the Missionary Monastery with the Church of the Ascension and the Visitation Convent with the Church of the Holy Heart of Jesus – form a compositional system together with the Gediminas Castle Hill and the Tauras Hill (Figure 5).



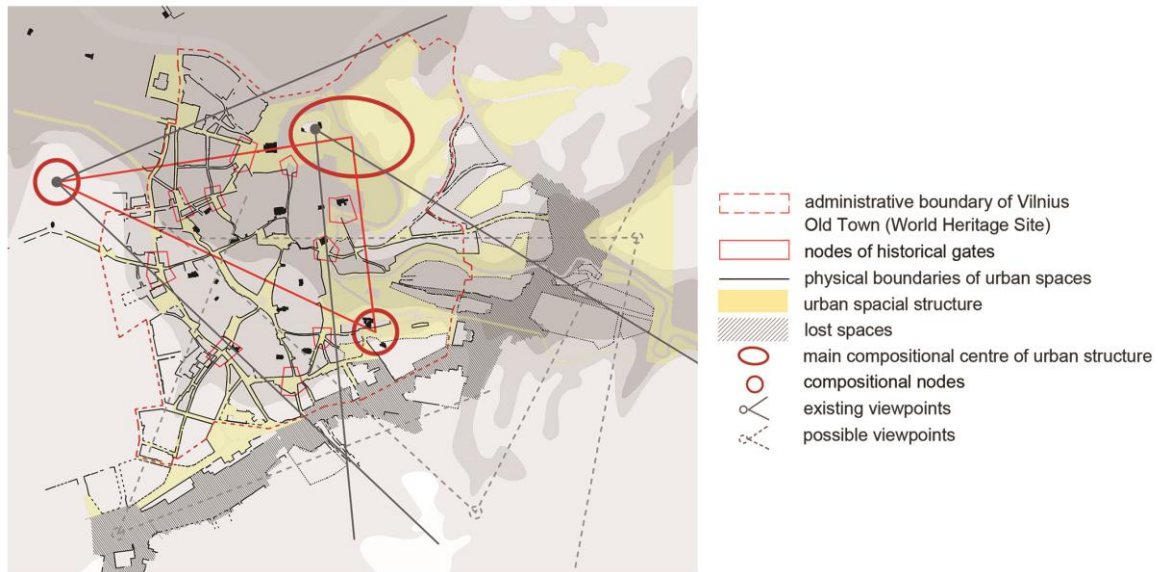


Fig. 5. Compositional scheme of the Vilnius historical core and its historical suburbs [25]

This compositional system is based on the interaction between the hills that frame the Old Town and the objects that mark different historical periods. Though the compositional core of the Church of the Holy Heart of Jesus and the Church of the Ascension, which is in the territory of the historic suburbs, is active in its form, this compositional core has not been given a functional meaning. Therefore, in order to enable this compositional system, it is important that the complexes of the Missionary Monastery and the Visitation Convent are not only the compositional but also a functional centre of the historic suburbs in the southeast part of the Old Town. It is important to emphasize that the compositional core of the Missionary Monastery and the Visitation Convent can be viewed not only from the side of the historical core and the city centre but also from the surrounding areas – the Rasos Forest Park, the hill at the crossing of Drujos and Belmonto streets. This expands the compositional boundaries of the zone of influence of the historical core of the city to the surrounding areas in the southeast of the Old Town and creates new compositional preconditions for the emergence of connections with the areas that are poorly integrated into the city structure.

The historic suburbs in the southeast part of the Old Town are characterized by open, often unformed spaces, with a large portion of greenery – parks, green squares, green slopes. The system of public spaces of the historical suburbs in the southeast part of the Old Town has been affected by the opening of the railway and bypass spatial corridors. Creation of the infrastructure spatial corridors, which are important for the city transport system, has, however, put an end to the former

system of public spaces in the historic suburbs and has led to the appearance of lost spaces along these engineering corridors (Figure 5).

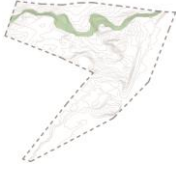
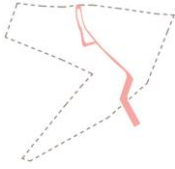
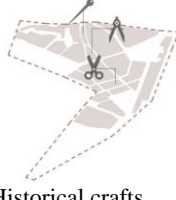
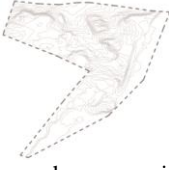
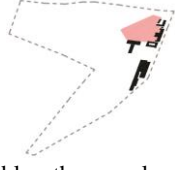

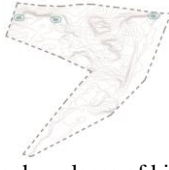


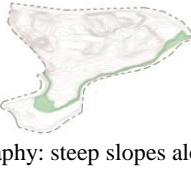
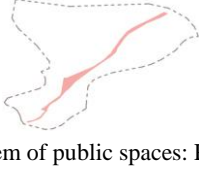

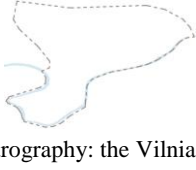

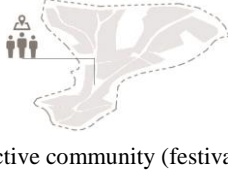
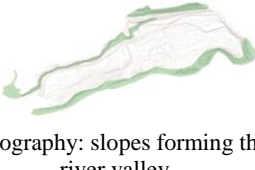
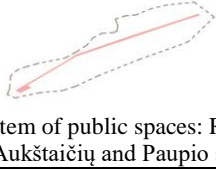
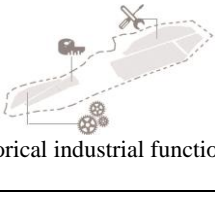
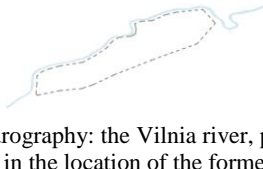
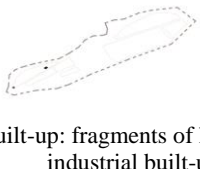

The morphology of the built-up in the Vilnius historical suburbs vividly reflects natural, economic, functional differences of suburban structures. The topographical basis had the major effect on the formation of the urban fabric of the historical suburbs. The built-up in the northwest part of the historical core (the suburb outside Vilnius, Totoriai and Šlapieji gates and Vingriai suburb), which is in the valley of the Neris river and is marked by level terrain, formed more consistently and faster than in the southeast part of the historical core, which is marked by a very complicated topography. Therefore, these suburbs saw the formation of a perimetric built-up, which is characteristic of the historical centre of the city. Meanwhile, the urban fabric in the Aštrusis galas–Subačius, Paupys, Užupis suburbs, which are in the expressive terrain zone, is of a different character – the built-up is extensive, with the perimetric open morphotype of built-up, homesteads, urban villas. These areas also have many converted former industrial territories, where parts of the blocks remain not yet formed, with free built-up. Given that the built-up was formed here under the influence of complicated topography and in order to highlight this urban peculiarity of the historic suburbs, the new built-up in the converted zones and unformed parts of the blocks should be characterized by a sensitive interaction between terrain and urbanized elements.



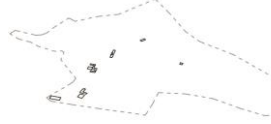






In summary of the results of urban analysis of the Vilnius historical suburbs in the southeast part of the Old Town, factors forming the identity of each suburb are identified, which can become the basis of the suburban development model (Table 2):



TABLE 2

Factors shaping urban identity of Vilnius historic suburbs in the southeast part of the Old Town  
[prepared by the authors]

Factors that shape urban identity		
Tangible		Intangible
Natural	Anthropogenic	
<b><i>Rūdininkai suburb</i></b>		
 Topography: slope surrounding the Old Town	 System of public spaces: Rūdininkai historical tract	 Historical crafts
 Topography: expressive relief	 Ensembles: the complex of railway and bus stations	 Historical market places
 Hydrography: places of historical springs	 Built-up: perimetric	 Ethnic minorities
<b><i>Užupis suburb</i></b>		
 Topography: steep slopes along the watercourse	 System of public spaces: Polock historical tract and squares	 Cultural objects
 Hydrography: the Vilnia river	 Built-up: open perimetric	 Active community (festivals, celebrations, commemorations, community traditions)
<b><i>Paupys suburb</i></b>		
 Topography: slopes forming the river valley	 System of public spaces: Routes of Aukštaičių and Paupio streets	 Historical industrial function
 Hydrography: the Vilnia river, ponds in the location of the former watercourse	 Built-up: fragments of historical industrial built-up	 Ethnic minorities

<i>Aštrusis galas – Subačius suburb</i>		
 Topography: slope surrounding the Old Town	 System of public spaces: historical gardens and parks	 Public objects
 Topography: hills in the territory	 Ensembles: natural-urban complexes (monasteries, churches)	 Various religious practices
 Hydrography: places of historical springs	 Built-up: various built-up morphotypes	 Ethnic minorities

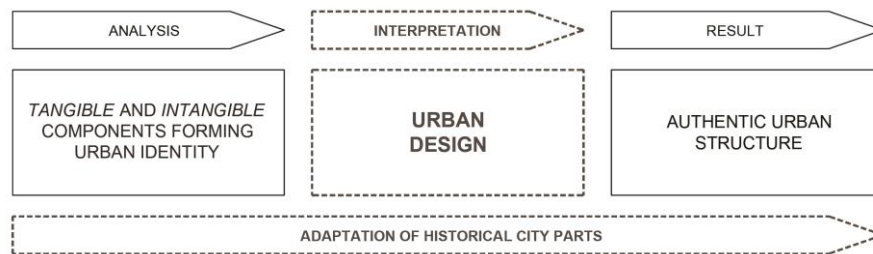


Fig. 6. Methodological scheme for shaping urban identity  
[prepared by the authors referring to the material in sources analysed]

1. The identity of *Rūdninkai* suburb is formed by the background urban built-up, the railway station complex and the intangible heritage of historical crafts, market places and culture signs of ethnic minorities, as well as by expressive topography and places of historical springs.
2. The identity of *Užupis* suburb is formed by landscape elements – expressive topography formed by the Vilnia river slopes and the background built-up, characteristic of the historical core, which appeared as a feature of a complete independent urban structure. The intangible layers that identify the suburb are the community with its traditions and artistic objects of attraction.
3. The main layers of identity of *Paupys* suburb are the slopes along the Vilnia river watercourse and fragments of the historical industrial built-up. The intangible heritage of the historical industry makes the suburb unique.
4. The identity of *Aštrusis galas–Subačius* suburb is formed by the natural features of the territory – hills and the slope that surrounds the Old Town, zones of different built-up, natural-urban complexes with the heritage of gardens and parks and public complexes that create intangible sociocultural relations.

## Discussions and Conclusions

One of the main reasons why urban planning is increasingly turning to the identity aspect is the consequences of globalization for the physical form of cities. On the one hand, globalization promotes the expansion and development of cities but, as global trends are used in urban planning, the connection of the territory with its historical, natural, social and cultural context is being lost. Understanding the significance of identity for both the physical form of the city and its socio-cultural life, a way is sought to adapt the historical parts of the city, which no longer meet the needs of a global society, to contemporary needs by strengthening the local spirit rather than losing it.

The article notes that the urban identity is influenced by tangible and intangible factors. Tangible factors are divided into natural (topography, geography, hydrography, vegetation and other natural features of the territory) and anthropogenic (all man made physical forms – built-up, network of streets, public spaces and their systems, land holdings, parks, gardens, etc.). These tangible factors can be assessed physically and they often become the main tools of urban design. Intangible factors that shape identity are equally important: various historical events,

commemorations, celebrations, festivals, religious rites related to a place, certain values, rules and the like prevailing in that territory.

The performed research of peculiarities of the urban fabric of the historical suburbs in the southeast part of the Old Town of Vilnius has showed very vividly that both the man made physical environment and the features of the natural environment present are significant for urban identity. In the studied suburbs, expressive terrain, also the river and its valley play a significant role for the formation and identity of a place. Man made built-up, ensembles, street routes and even the built-up function adapted to natural conditions.

Urban identity should be perceived as the entirety of multi-layered factors that shape a territory, distinguishing one particular territory from others.

Urban identity is shaped by tangible and intangible factors. A different combination of these factors creates the identity of each location. Urban identity should not be perceived as unchanging – it is a process that is shaped rather deliberately. Urban design, architecture and landscape architecture are those activities that help shape urban identity of a territory. In the reconstruction of historical parts of cities, in order to achieve a contextual architectural and urban solution, an analysis should be carried out first of all, during which the factors shaping the identity of the territory should be distinguished and evaluated. The factors distinguished during the urban design process should be interpreted and integrated into the urban fabric of a new quality. The aim is urban structure that has identity, local spirit (Figure 6).

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**Kopsavilkums.** Rakstā apskatīta pilsētvides savdabības, vizuālās unikalitātes un kultūras identitātes saglabāšana globalizācijas procesu skartajā pasaulē. Vispirms tiek apspriesta pilsētvides identitāte kā tāda, kur caur literatūras avotu izpēti tiek identificēti pilsētas veidojošie faktori. Tiek izdalīti materiālie un nemateriālie faktori. Pētījumā, lai atklātu pilsētu vēsturisko daļu identifikācijas un identitātes veicināšanas problēmas un pārbaudītu šajā rakstā aprakstīto pilsētvides identitātes veidošanas metodoloģiju, detalizēti tiek analizēta Viļņas vēsturiskās priekšpilsētas dienvidaustrumu daļa. Veiktais pētījums, par vēsturisko priekšpilsētas pilsētvides audumu, ļoti spilgti parādījis, ka pilsētvides identitātei ir nozīmīga gan cilvēka veidotā fiziskā vide, gan klātesošās dabas vides īpatnības. Nozīmīgu lomu pilsētvides identitātes veidošanā ieņem izteiksmīgais reljefs. Pētījumā konstatēts, ka sabiedrības veidotā apbūve, ansamblī, ielu struktūra, tiek racionāli pielāgota esošajiem dabas apstākļiem. Ciešā mijiedarbība starp dabas apstākļiem un cilvēka darbību ir radījusi šo vēsturisko teritoriju identitāti. Tiek atzīmēts, ka pilsētvides identitāti nevajadzētu uztvert kā nemainīgu – tas ir process, kas tiek veidots diezgan apzināti. Pilsētas dizains, arhitektūra un ainavu arhitektūra ir aktivitātes, kas palīdz veidot pilsētas identitāti.

# Laidu Manor House School. Assessment of Cultural Heritage Assets upon Closing of the School

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**Abstract.** The architecture of Courland manor houses is rich in classical monuments. Many of them form impressive building ensembles. The use of the buildings varies, historically – schools, parish boards, farm administrations, nowadays – guesthouses, private properties and still schools. One such site is in Laidi, where the existence of a school is problematic.

**Keywords:** architectural and cultural heritage, monument protection and preservation, landscape architecture, historical environment

## Introduction

On the side of the Aizpute–Kuldīga road, there is one of the most interesting ensembles of manor buildings from the classical period – Laidu Manor (*in German – Laiden*). Its central part consists of the manor house, two adjacent blocks – the manager's house and the coach house / barn. The buildings are interconnected by a classical stone fence and gates. Other evidence of the manor house has also been partially preserved. From 1921 the manor buildings housed a school. It is now being closed. What will happen to the historic manor buildings? What is their significance in the overall development of manor architecture in the early 19<sup>th</sup> century? Isn't there special value for rural children to learn in a culturally rich environment?

## Owners and history of the manor

In 1562, Bishop Magnus von Holstein leased the manor to his chamberlain Erdmann von Gantzkaw [1]. In 1601, the brothers Johann, Karl and Magnus von Gantzkaw divided the property between themselves. Johann and Magnus continued to manage the Courland properties, while Karl took over the Pomeranian manors [2]. From these and later documents, it can be concluded that at the turn of the 16th and 17th centuries there was a building or group of buildings in Laidi, which can be considered as the beginning of the settlement. Around 1620, the von Szöge family began to manage Laidu Manor [3]. First it was Karl (? – 1634), the younger son of the owner of Kazdangas Manor, Johann Manteifel, then his son Johann. Around 1650, Laidi became the property of Colonel Johann von der Brincken (?–1672) and later belonged to his widow Margarete, née von Redern. It is known that in 1678, Manteifel von Brincken sold the Valtaiki tavern and two farms to his widow as the owner of Laidu Manor [4]. In 1695, the manor was owned by Ernst Johann von der Brincken (?–1749). In 1720, the manor was acquired by

Karl Heinrich von Mirbach (1686–1745). From 1750, it was owned by Baron Christopher Alexander von Taube, later by his son Ernst Johann. In 1797, Laidi was bought by the rich Liepāja merchant Hermann Johann Friedrich Bordehl, who in 1800 acquired the title of nobleman and continued to be called Bordehl von Bordelius (1754 – 1826).

The construction of the manor house began after 1808, when the owner of the Katzdangen (*Latvian – Kazdangas*) Manor, Karl Gothard Ernst von Manteifel-Szöge (1756–1834) bought the Laidi for his daughter Katharina Juliane Johanna, called Jeannette (1787–1846) von Lambsdorff, when she was married to Johann Levin, Count von Lambsdorff (1781–1852), the owner of the Suhr (*Latvian – Zūru*) Manor. It was in 1800 that the construction of the mighty Katzdangen Palace began under the direction of German master builder Johann Georg Adam Berlitz. The manor house of Laidu Manor is believed to have been built according to a design by the architect Heinrich Eduard Dicht (1782–1843) [5]. Later, Count Nikolai Hermann von Lambsdorff (1817–1866) and his wife Charlotte Dorothea Caroline, née *Lieven* (1823–1857) were the owners of Laidu Manor. The next owner of the manor, their son Count Johann Gustav Nikolaus von Lambsdorff (1823–1902), died unmarried. The manor buildings did not suffer during the 1905 Revolution in Latvia. Until the Latvian agrarian reform, the manor belonged to the von Lambsdorff family. Count Lambsdorff did not agree to the allocation of the new folwark (*German – Neuhof*) as a non-alienable part and tried to exchange it for the centre of Laidu Manor with all its buildings and park. He pointed out that the Charlotte *Edge* (small, or folwark) manor he was granted was the worst folwark. There were only four rooms in the building, only two of which had plank floors and the rest paved floors. Apart from that, there was no garden and forest, besides, the arable land was very bad as it





Fig. 1. Hermann Johann Friedrich Bordehl  
[internet resources]



Fig. 2. Karl Gothard Ernst von Manteifel-Szöge [internet resources]

had been lying fallow for many years. However, the Count's efforts were in vain and in 1923 he sold the folwark house, while staying in Paris himself. From 1921, the Laidu Primary School began to operate in the manor house and adjacent buildings.

#### The architecture of the manor house

The Laidu manor house is a peculiar monument of classicism. The building is covered by a low-pitched gable roof with chamfered ends. The two longitudinal facades facing the courtyard and the park, are identical. The central part is accentuated by a portico of four Ionic columns with a triangular pediment. Above the main entrance is a large semi-circular window with ornate fan-shaped tracery. The ends of the facade are also strongly accentuated with buttresses, formed by four columns with entablature on the ground floor and a large semi-circular window above with equally ornate tracery. The overall architectural composition of the facades also includes the plinth solution floor, which has larger and smaller semi-circular windows. The floors of the building are separated by a wide



Fig. 3. Laidu manor house from the front yard  
[photo by author, 2014]



Fig. 4. Laidu manor house from the park  
[photo by author, 2022]



Fig. 5. Laidu manor house [internet resources]



Fig. 6. The central portico of the manor house  
[photo by author, 2014]



Fig. 7. The manor house from the front yard  
[photo by author, 1982]

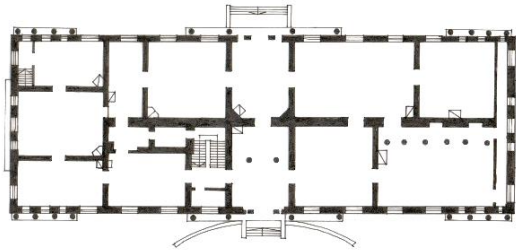


Fig. 8. Ground floor plan of the manor house  
[drawing by author]

inter-storey cornice. The facades reflect the internal functional structure: the ground floor with large windows was representative, the second floor with small square windows was for servants, guests, etc., and the plinth solution floor housed the kitchen and servants' quarters. A historic image of the manor house published in the book *Baltic Manor Houses* by architect Heinz Pirang, shows the facade of the yard [6]. The architecture of Laidu manor house shows a solution that influenced the architectural image of more than one Courland palace and manor house, for example, the Snēpeles manor house, built in the 1830s for A. von Hahn.

#### The interior of the manor house

From 1921, when the Laidu manor house became a school, the interior was remodelled to accommodate the new function. For example, in 1923, during a major renovation, the wall paintings in some rooms on the ground floor and in the hall were removed, as were all the ceiling decorations. During this period, the exterior door leaves were replaced and a new heating system was installed, destroying a number of historic taps and fireplaces. The worn parquet flooring in the dining hall was also replaced. As can be seen, the 1920s were unthinkingly devastating for the old building. However, a number of photographs from 1949 show a beautiful classical stove still in place and a series of Ionic columns in the dining room [7]. In the centre of the facade of the furnace was a scenic scene, below it a rhythmic ornament and below – a



Fig. 9. Ceiling and wall paintings  
[photo by author, 2022]

series of meanders. On either side of the furnace hearth was a vertically arranged garland of flowers and fruit. However, not everything from interior decoration and carpentry products has been lost over time. The ceiling beams of the hall are still supported by two Doric columns, the historic door leaves, and the internal shutters of the windows are preserved. In one of the rooms, wall and ceiling paintings with antique scenery were uncovered. Judging by them, similar paintings may also be found in other rooms of the manor house under layers of later paintwork.

#### Laidu manor house buildings

Laidu manor house was historically a large economic complex with many buildings and structures. In 1921, the following manor house buildings and properties were listed: two residential houses, two barns, three cattle and poultry sheds and wood sheds, a yard part of the park and a garden [8]. The manor's house buildings are also evidenced by a plan of the manor's lands made in 1922 [9]. The buildings symmetrically placed on both sides of the manor's house – the manager's house and the coach house / barn are one-story, covered with a steep gable roof, the ends of which are partially sloped. A portico with a triangular pediment is created in the symmetrical centre of the buildings. As with the manor house, there is a large semi-circular window above the main entrance. The roof eaves are particularly emphasised by the rich shaping. However, the somewhat unwieldy form of these buildings is more attributable to local building traditions. The manor's house is connected to these buildings by a stone wall fence with a monumental gate that already resembles a triumphal arch. The aforementioned buildings next to the manor's house have undergone changes over time. The manager's house, the oldest building on the manor, underwent major changes in 1929 due to the collapse of the ceiling. The layout of the building was completely changed and the old metal wind indicator disappeared from the roof. The original layout before the changes was not recorded.





Fig. 10. Land plan of Laidu Manor. 1922.  
[Latvian State Historical Archive,  
1679. f., 2. descr., p. 218.]



Fig. 11. Manager's house [photo by author, 2014]



Fig. 12. Manager's house [photo by author, 2014]



Fig. 13. The gate connecting the manor's house and the manager's house [photo by author, 2014]



Fig. 14. One of the corner towers of the manager's house  
[photo by author, 2022]

The barn / coach house also underwent a change when the Laidu Educational Society was established there. In 1924, a stage was added to the end of the building, changing the shape of the building.

### Park

The roughly 14-hectare manor park was laid out in the second half of the 19th century and contains three ponds. The park has a mixed avenue of deciduous trees and its oldest part is around and to the south of the central building – the manor house. This part of the park has the characteristics of a regular layout. Most of the park north of the manor house is laid out in an open plan. In 1993, a number of native conifer species were listed in the park, such as Norway spruce, Norway maple, black alder, white alder, European white, common hazel, European spindle, Mayday tree, common oak, goat willow, etc. During this time, there were also introduced species, such as conifer species: Caucasian fir, Siberian fir, Silver fir, Blue spruce, Baltic pine, Eastern white-cedar, as well as broadleaved trees and shrubs: Sycamore and Amur maple, Silver maple, Horse chestnut, Siberian pea shrub, Traveller's joy, Shiny cotoneaster, European beech, White walnut, Oregon grape, English dogwood, Staghorn sumac, white and red Apple rose, Brittle willow, Black elder, White meadowsweet, Siberian dogwood, etc. In 1993, the existing situation of the park was also described: there was a milk collection

centre, sheds, a barn, an old stage, tables and benches at the edge of the pond [10]. In 2011, the preliminary design of Laidu Manor Park was studied by Ilze Māra Janelis, an architect and specialist in historical parks and gardens. She points out, among other things in relation to the buildings, that *even at the beginning of the 1920s the now apparently 19<sup>th</sup>-century landscape park was neither a continuous area nor a coherent composition. All this leads to the conclusion that the centre of Laidu manor house and the park were built over a longer period of time. Presumably, the former buildings are believed to have been at least roughly in the same locations as the present ones. In addition, it is possible that all three of the present main buildings could have been rebuilt in the first half of the 19<sup>th</sup> century from earlier material. This is evident on the north facade of the manager's house, where an exposed sgraffito suggests an earlier period* [11]. The author also points out that the two hexagonal towers at either end of the manager's house could have been built at the end of the 18<sup>th</sup> century, when this ancient Romanesque fashion was common not only in Latvia, but also throughout Europe. Yes, it was the time of Romanticism, when medieval towers appeared in more than one manor house, for example in Suntaži (*German – Sunzel*), Bikšēre (*German – Libsien*), Ērgļi (*German – Erlaa*), Īle (*German – Ihlen*) and elsewhere. But how did these towers end up at the back of the Laidu Manor manager's house, where no one could really perceive them from the front yard? Maybe the layout of the development was different? There are many questions in this respect and further research is required.

His memories of the manor house were published by L. Mieriņš. He writes that the outbuilding of the manor house contained a laundry room with two large boilers, a bakery and a sauna. The manor manager's house was home to teachers, a school attendant, a midwife and others [12].

### **School – manor house**

As already mentioned, in 1921 a school was established in the Laidu manor house and in the two adjacent buildings, which did not cease its activities after the Second World War. Laidu School – the name this place has been known by for more than 100 years! Many generations have come from this school and gone on in life, taught for many years by local teachers, providing their knowledge and skills, cared for by their parents, both when they started school and later when they continued their education. It is absolutely unbelievable that this thread of education in the historical environment of Laidi can be broken! As of 2022, Laidu School will no longer exist and the fate of the manor ensemble is unknown [13]. The buildings will be managed by the Laidu Parish Administration, which will look for a solution for the future use of the buildings in the near future.

Many of the palaces and manor houses survived the Soviet era because they housed schools. In recent years, the school network has been streamlined and the old manor houses have been left empty and their future is unknown. It is strange that in our neighbouring country, Estonia, the book *A Guide to Estonia's Manor Schools* was published just recently [14]. The situation is quite different there, schools in palaces and manor houses exist and there is no intention to close them en masse! In Estonia, the project *Manor Schools – Preserving through Use* was funded by the European Economic Area and the Norwegian Financial Mechanism. The Association of Estonian Manor Schools was also created. Great care is taken to ensure that children learn in a culturally rich environment. I would not like to mention the schools in Estonia's palaces and manor houses where the number of pupils exceeds 100, such as the Vasalemma Primary School at Vasalemm Manor, the Secondary school at Aruküla Manor, etc., but rather those manor houses where the number of pupils is small and which still exist, most often combining kindergarten, vocational school and primary school, such as Kabala Manor (28 pupils and 27 kindergarten attendees), Vodja Manor (30 pupils), etc. However, a review of the catalogue of Estonia's manor schools shows that the institutions there are well established and are not in danger of being abandoned. For example, the Vatla Manor House School, a 19<sup>th</sup>-century building where the school opened in 1923 still exists with 12 pupils [15]. Of course, time and social circumstances can make their own adjustments, but judging by the current situation, there is no need to worry.

Time will tell in Latvia, whether the Kortenhof manor house (*Latvian – Beļavas*), the Lappier manor house (*Latvian – Ozolu*) and many others will exist without the school...

### **Conclusions**

The Laidu manor ensemble with its park is a remarkable testimony of classicism architecture, protected by the state as a cultural monument. It reflects the golden age of Courland Classicism, unmatched anywhere else in Latvia. The building of the centre of the manor is believed to have been formed long before the construction of the existing manor house and indicates an earlier period of construction, future research of which is urgently required. The closure of the school in this cultural monument, which has been restored with state and municipal funds over many years, is worrying. The main aim of this publication is not to present in detail the cultural history of the still understudied Courland manor house ensembles, to which Laidu Manor also belongs, but to draw attention to the future fate of this site, when the school will cease to exist and the future remains unknown.

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## AUTHOR:

In 1979, **Jānis Zilgalvis** graduates from the Faculty of Architecture of the Riga Technical University. In 1990, he defends his doctoral thesis on the theme "The Latvian manor architecture from the second half of the 19th century until the beginning of the 20th century. Since 1995, he heads the Department of Architecture of the State Inspection for Heritage Protection and from 2001 until 2014 – he is the dean of the Faculty of Architecture and Urban Planning of Riga Technical University. Since 2012, he is a full member of the Latvian Academy of Sciences. He has more than 180 scientific and popular scientific publications, and he is the author of 21 books (for some books – a co-author). His main research directions are as follows: manor architecture and history of culture, sacred architecture, protection and utilization of the cultural heritage.

**Kopsavilkums.** Viens no interesantākajiem klasicisma laika muižu apbūves ansambļiem ir Laidu muiža. 1562. gadā bīskaps Magnuss fon Holšteins muižu izlēņoja savam kambarkungam Erdmanim fon Ganckavam. 1601. gadā brāļi Johans, Karls un Magnuss fon Ganckavi sadalīja savā starpā īpašumus. Ap 1620. gadu Laidu muižā sāka saimniekot fon Cēges dzimtas pārstāvji. Vēlāk īpašnieki mainījās. Kungu mājas celtniecība sākusies pēc 1808. gada, kad Kazdangas muižas īpašnieks Karls Gothards Ernsts fon Mantefels - Cēge Laidus nopirka savai meitai Katarinai Julianeij Johannai fon Lambsdorfai, kad viņa bija stājusies laulībā ar Zūru muižas īpašnieku Johanu Levinu grāfu fon Lambsdorfu. Domājams, ka Laidu muižas kungu māja celta pēc arhitekta Heinriha Eduarda Dihta projekta. No 1921. gada Laidu muižas kungu mājā un blakus ēkās sāka saimniekot Laidu II pakāpes pamatskola. Kungu māja ir savdabīgs klasicisma stila piemineklis. 1921. gadā uzskaitītas sekojošas – divas dzīvojamās ēkas, divas klētis, trīs lopu un putnu kūtis, malkas šķūņi u. c. Par muižas apbūvi liecina arī 1922. gadā izgatavotais muižas zemju plāns. Kungu mājai abās pusēs simetriski novietota pārvaldnieka māja un ratnīca – klētis. Kungu māju ar šīm ēkām savieno mūra žogs, kurā izbūvēti monumentāli vārti. Minētie kungu mājas blakus korpusi laika gaitā piedzīvojuši izmaiņas. Pārvaldnieka mājai, kas ir pati vecākā muižas ēka, 1929. gadā pilnībā tika mainīts plānojums un no ēkas jumta pazudis senais metālkaluma vēja rādītājs. Arī klētis – ratnīca piedzīvoja pārmaiņas, kad tajā ierīkoja Laidu Izglītības biedrību. Aptuveni 14 ha plašais muižas parks ierīkots 19. gs. otrajā pusē un tajā atrodas trīs dīķi. Parkā ved jaukta lapkoku aleja un tā vecākā daļa atrodas ap centrālo ēku – kungu māju un uz dienvidiem no tās. Šai parka daļai ir regulāra plānojuma iezīmes. Parka lielākā daļa ziemeļu virzienā no kungu mājas risināta brīvā plānojumā. 2011. gadā Laidu muižas parka pirmsprojekta izpēti veikusi arhitekte, vēsturisko parku un dārzu speciāliste Ilze Māra Janelis. Skola pēc II pasaules kara, savu darbību nepārtrauca. Tātad Laidi, kā skola ir atpazīta jau 100 gadus! Daudzas paudzes nākušas no šīs skolas un aizgājušas tālāk dzīvē, to pārstāvju ilgus gadus mācījuši vietējie skolotāji, sniedzot savas zināšanas un prasmes, par viņiem rūpējušies vecāki, gan skolas gaitas uzsākot, gan vēlāk, turpinot izglītību. Pilnīgi neticami, ka šis izglītības pavediens vēsturiskajā vidē – Laidos var tikt pārtraukts! No 2022. gada Laidu skola vairs nepastāvēs un muižas ansambļa tālākais liktenis nav zināms. Ēku apsaimniekotājs būs Laidu pagasta pārvalde, kura tuvākā nākotnē meklēs ēkām turpmākās izmantošanas risinājumu. Liela daļa muižu pils un kungu mājas padomju laikā izdzīvoja tāpēc, ka tajās atradās skolas. Pēdējos gados skolu tīkls tiek optimizēts un senās muižu ēkas pieliek tukšas, un to nākotne – nezināma. Taču, mūsu kaimiņzemē Igaunijā tieši nesen tika izdota grāmata *Ceļvedis pa Igaunijas muižu skolām*. Tur situācija ir pavisam citādāka, skolas pils un kungu mājās pastāv un nav pat nodoma tās masveidā likvidēt! Tāpēc satraucoša ir Laidu skolas slēgšana šajā kultūras pieminekli, kura atjaunošanā ilgus gadus ir ieguldīti valsts un pašvaldības līdzekļi.



# "Official" and "private" parks of the XVIII–XIX centuries through the prism of general landscape trends of the time

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**Abstract.** The article analyzes the basic principles of landscape design of the imperial and aristocratic parks in the Russian Empire in the XVIII–XIX centuries. There were "official" parks designed to be visited by high-ranking guests, and "private" parks, which were not covered by the canons of the "official" park. In the Tsarskoye Selo imperial residence Catherine's Park performed the function of "official" with the appropriate function of pomp, and located next to it Alexander's Park – respectively, the function of "private" imperial park. Catherine's Park became a model to follow one of the most famous parks in modern Ukraine – Oleksandriia Park in the city of Bila Tserkva. The common and different between Tsarskoye Selo park residence and aristocratic parks in Ukraine are analyzed, the principles of planning of these parks and the main constituent elements are compared. Based on this, the basic principles of planning parks of the Classicism and Empire style era in Ukraine and the "iconic" set of pavilions are determined. The general canons of the "Ossian Park" and their specific embodiment are analyzed on the example of Sofiiivka Park in Uman. It was determined that the "Ossian Park" based on the canons is opposite to the parks of Classicism-Empire style. The methods of historical and culturological analysis, method of comparative analysis, method of field surveys used.

**Keywords:** Oleksandriia Park, Sofiiivka Park, "official" and "private" parks, landscape trends, Baroque, Classicism, Historicism-Romanticism

## Introduction

The period of Classicism-Empire style (the last third of the 18th century – the first third of the 19th century) in Ukraine was marked not only by the construction of palaces, representative administrative and educational institutions, but also by the emergence of prominent parks such as Oleksandriia Park. The next stage of landscape design was the so-called "Ossian parks", in fact – the parks of romanticism, an example of which is the Sofiiivka Park in Uman [12].

In the Russian Empire, this was the period of the creation of, so to speak, "official", emphatically pompous and luxurious imperial parks, such as Catherine's Park in Tsarskoe Selo. But next to Catherine's Park is a more "private" Alexander's Park, less known to the general public. In the Tsarskoye Selo residence these two parks coexist, while the Oleksandriia and Sofiiivka parks are the embodiment of two types of aristocratic parks scattered in space – the "official" type of Oleksandriia Park for the reception of imperial family's members, according to the canonical set of landscape components, and the "private" type of Sofiiivka Park, not designed for such officialdom, and therefore not limited by ideological canons.

The formation of these two opposite types of parks, even in imperial residences, can be seen as a subconscious reaction to the rigid regulation of public life and a kind of release and the opportunity to be not

rigidly regulated by social levels and requirements of classicism and empire space, but from time to time corresponding to the inner world of man and his needs.

"Official" aristocratic parks are designed for intellectual pleasure, they are focused on ancient legends, allegories and plots, when elements of park design are colonnades, grottoes, Chinese bridges, temples of friendship, columns, obelisks, small pavilions and "Chinese"-stylized pavilions in Chinoiserie style. The parks of Oranienbaum, Peterhof, Tsarskoe Selo, and Pavlovsk have been models for the classical image of the aristocratic park since the 18th century [12].

Instead, the "Ossian parks", which essentially opposed the "official" parks of classicism-empire, were aimed at creating the opposite atmosphere – melancholy, mysticism, philosophical reflection, solitude in their own world [12].

In order to understand the specifics of this type of park planning, it is first necessary to briefly describe the essence of the phenomenon of "Ossianism".

In the late eighteenth and early nineteenth centuries in Western Europe, and later in the Russian Empire a period of fascination with ancient Celtic history and mythology began, the so-called period of "Ossianism". The rapid spread of this phenomenon was facilitated by the work of the Scottish poet of the eighteenth century

James Macpherson, who with the help of ancient Celtic legends and songs created a romantic image of the ancient bard and warrior Ossian, who lived in the III century AD and was the eldest son of the legendary king of the state of Morven on the west coast of Scotland. Macpherson's poetry has a melancholy-pessimistic colour, it describes the natural landscapes of ancient Scotland – it's gloomy mountain cliffs, covered with forest and shrouded in clouds, cut through cliffs with resounding echoes, rocky caves, old trees, brown trees, moss waterfalls falling from the rocks, endless heather and thistle plains, over which the wind roars, clubs of fog that chases the wind, and this fog hangs over dead swamps overgrown with reeds. Dark low clouds with shadows of heroes killed in battle are rushing across the harsh sky. The gloomy pessimistic landscape is illuminated by the pale moonlight, which barely breaks through the clouds of fog and corresponds to the constantly tragic inner state of the protagonist – the bard Ossian. Everywhere – the feeling of nature as a formidable dangerous and tragic force. Animals are also described – roe deer and fallow deer hiding among the rocks. Against the background of these harsh landscapes, numerous military exploits of King Fingal's army and his son Ossian against foreign invaders – Scandinavians and Roman legionnaires, as well as illegal contenders for the throne of the state of Morven – are described. All poetic plots, as a rule, end tragically with the death of the main characters.

Macpherson's characters exist in a semi-real, semi-mystical world inhabited by various beings. Ossian himself communicates with living people, with the shadows of dead heroes and with the forces of nature and natural elements. A specific feature of Macpherson's poetry, which distinguishes it from the poetry of other poets, is emphasized psychologism, naturalistic description of the experiences of heroes and their enjoyment of their own suffering, "joy of sorrow" and "life in the darkness of sorrow." Descriptions of the landscapes of Scottish nature, which have also become an innovation in literature, correspond to this mood of enjoyment of experiences and sufferings.

It should be noted that the term "Ossianism" in European and Russian literature and art, including in the art of landscape design, emerged later than the appearance of Macpherson's poems and "generalized" with a specific name and defining features of his creative direction, based on the tragedy of human passions against the background of formidable or melancholy natural landscapes, untouched by human hands. Descriptions of nature essentially become descriptions of hidden human experiences.

In "Ossianism" educated circles of Europe and the Russian Empire experienced a new phenomenon, which led to admiration for Macpherson's poetry, translated into all European languages, in different countries.

Literary works of other authors, operas and paintings appear as a secondary phenomenon in relation to Macpherson's poetry. Macpherson's poems influenced

Goethe's work, in particular his tragic work *Die Leiden des jungen Werthers*, as well as the work of Wordsworth, Southey, and Coleridge, who created their own images of the Romantic Middle Ages. Hugo and Byron were inspired by the image of Ossian.

As a result of the influence of "Ossianism" to some extent and some paintings by symbolist artist Arnold Böcklin can be considered, in particular his emphasis on the tragic and mystical cycle "Death Island" (1874–1885) with the theme of Charon-carrier of souls to a mysterious desert rocky island with ancient Greek "trees of sorrow" – cypresses, and the painting "Sacred Grove" (1882) depicting the mysterious rite of worship before the altar in a gloomy silent landscape.

The current of "Ossianism" and the Russian Empire, where this trend began to spread in the 1780s, did not escape the work of Derzhavin, Karamzin, Pushkin, Lermontov.

The aim of the study was to analyze how the canons of the aristocratic park changed during the late 18th and 19th centuries and how the St. Petersburg and European traditions of park design were borrowed during the transfer to other regions of the empire, including Ukraine.

Mandatory elements of the aristocratic parks of the Classicism-Empire style period were the presence of classical pavilions – colonnades and rotundas, as well as romantic ruins and exotic "Chinese" pavilions and gazebos, which became especially fashionable in the Chinoiserie era. If we talk about the imperial parks of this period, they certainly had ideologically significant elements – obelisks, columns, pavilions in honour of military victories.

Scientific sources directly devoted to the history and planning of the Tsarskoye Selo residence are the works of Petrov A. [11], Tumanova N. [13], and sources dedicated to the Oleksandriia and Sofiivka parks – publications of Kosenko I. [8], Rodichkin I., Rodichkina O., Hrynchak I., Sergeev V., Feshchenko P. [12].

The aspect of the relationship "natural environment – architecture", which is typical for Ukraine and was covered in the article by Chernyshev D., Ivashko Y., Kuśnierz-Krupa D., Dmytrenko A. [1], was analyzed separately.

Since the period under study in the Russian Empire is associated with the spread of the so-called "Anglo-Chinese" landscape park, sources on traditional Chinese gardens were included – such as publications by Ivashko Y., Chang P., Dmytrenko A., Kozłowski T., Mykhailovskyi D. [3], Ivashko Y., Chernyshev D., Chang P. [5], Ivashko Y., Kuśnierz-Krupa D., Chang P. [6], Ivashko Y., Kuzmenko T., Li S., Chang P. [7], Orlenko M., Dyomin M., Ivashko Y., Dmytrenko A., Chang P. [9], Orlenko M., Ivashko Y., Chang P., Ding Y., Krupa M., Kuśnierz K., Sandu I.G. [10], Żychowska, M., Ivashko Y., Chang P., Dmytrenko A., Kulichenko N., Xin Mu Z. [14].

Sources related to the use of historical traditions in modern Chinese landscape design were included – the

article by Ivashko Y., Chang P., Zueva P., Ding Y., Kuzmenko T. [4].

The artistic aspect is presented in the publication by Gryglewski P., Ivashko Y., Chernyshev D., Chang P., Dmytrenko A. [3].

As a result, the main purpose of the study was formulated – to analyze the principles of planning and construction of Oleksandriia and Sofiivka parks through the general prism of landscape trends in the Russian Empire at the time, to identify common and different between specific examples of aristocratic parks – "official" and "private", basic landscaping techniques and the most common stylistic solutions of pavilions.

The problem is as follows:

study of the principles of landscape design of the XVIII–XIX centuries is important not only in terms of history, but is useful in modern conditions, when environmental problems have exacerbated the problem of creating new green spaces and protecting existing parks, especially in large cities;

Sofiivka Park is a rare type of "Ossian Park", so it is often mentioned along with another "Ossian Park" – Monrepos Park.

### Materials and Methods

The solution of the research tasks led to the choice of general scientific research methods. Methods of historical and culturological analysis allowed to analyze the basic principles of traditional landscape design of the late XVIII – XIX centuries, the main components of the two main types of aristocratic parks – "official" and "private" and the principles of their planning.

The method of comparative analysis allowed us to compare how the traditions of imperial parks landscape design were gradually transferred to aristocratic parks of other territories, to compare common and different between them, to analyze which components disappeared or simplified and which remained. This method allowed a deeper analysis of the role of Chinoiserie style pavilions as an integral part of the aristocratic parks of this period and to determine the degree of their similarity to the original models – Chinese small pavilions in private gardens. Also, the method of comparative analysis allows you to compare the principles of organization of parks of a certain period – Tsarskoye Selo residence parks, Olexandriia Park and Sofiivka Park.

The study used the method of field surveys with the implementation of dimensional drawings and photofixation, on the basis of which conclusions were formulated.

### Results and Discussions

#### *Imperial parks of Tsarskoye Selo as a standard park of the Russian Empire of the XVIII–XIX centuries*

Both European and, first of all, imperial parks around St. Petersburg, especially the Tsarskoye Selo residence Catherine's and Alexander's parks, which are typical examples of canonical imperial parks of the

Russian Empire of the 19th century, were a model for the creation and development of Olexandriia Park.

It is noteworthy that Catherine's Park has the characteristics of "official" "royal" monarchical park with a pronounced pomp, the presence of symbolic objects that perpetuate the greatness of the Russian Empire, while Alexander's Park is a "private" park, close in plan to irregular landscape park (Fig. 1).

During the reign of Catherine II, the park was decorated with buildings that were of ideological importance to the Russian Empire – "Morea (Small Rostral) column", "Chesmen column", "Cahul obelisk", "Tower-ruin", which symbolized victory in the war with the Turks.

The fact that a new pavilion, obelisk or decorative element was erected in the park every year was also of ideological significance.

In the mid-1760s, lime alleys were planted along the Great Pond, and another lime alley was planted on the ridge of the hill above the pond, on the continuation of the slopes of the Katalnaya (Sledding) Hill.

In addition to buildings of a purely ideological orientation, pavilions and gazebos were erected in the style typical of the early Classicism of the 1770s and 1780s. In 1778–1786, simultaneously with the development of the Chinese village of Alexander's Park in the neighborhood designed by J. Felten (or A. Rinaldi?) and under the rule of V. Neyolov on the border between Catherine's Park and "New Garden" of the Alexander's Park on the shore of one of the Upper Ponds Chinese (Creaking) gazebo was built in the then popular Chinoiserie style (Fig.2).

It is no coincidence that we mentioned A. Rinaldi's outstanding Chinoiserie-style object outside the Tsarskoye Selo residence, as it preceded the construction of the "Chinese Gazebo" on top of the "Big Whim", probably by the same architect in 1778–1786, which formed one harmonious whole of artificially created object and natural components that have historically been used in traditional Chinese landscape design – artificial hill, pond, greening.

The period of the beginning of the 19th century, chronologically connected with the spread of the empire after the victory over Napoleon's troops in the war of 1812, was marked by the fact that according to V. Stasov's project in 1817 the gate "To my kind comrades-in-arms" was built in honor of the Patriotic War of 1812. In 1821 this gate was moved to another place, on the road to Pavlovsk. At the same time, European architects of the Chinoiserie style failed to create an authentic "Chinese" image of such a pavilion and the natural environment around it.

In 1850–1852, according to the project of I. Monigetti, another ideological structure was erected on the shores of the "Great Pond", which symbolizes the victory over the Turks – the pavilion "Turkish Bath". At this stage, on the site of a former meadow near the Zubov's wing of the palace in 1855–1856, the "Own Garden" (closed to outsiders) was arranged. The layout

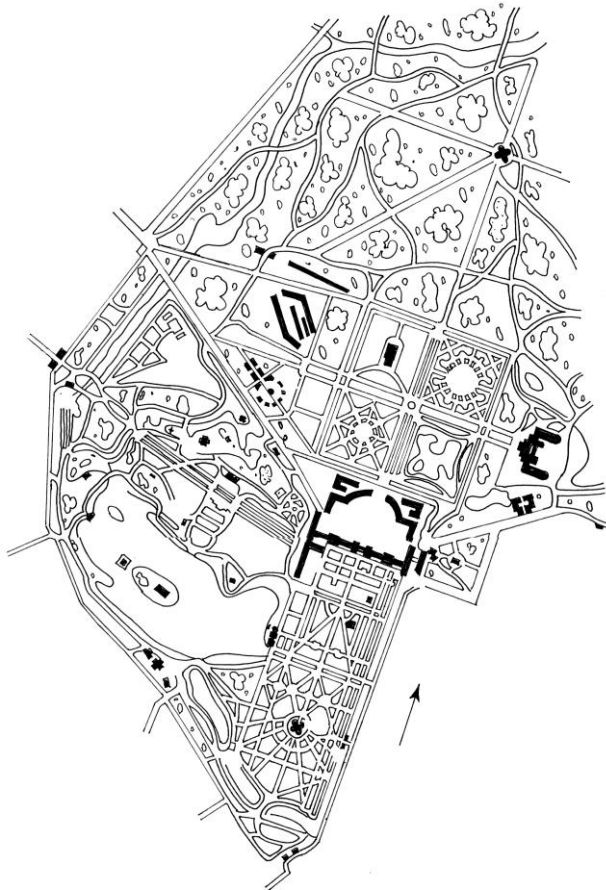


Fig. 1. Catherine's Park and Alexander's Park of the Tsarskoye Selo residence. Plan [drawings by P. Chang based on materials from the stocks of Yu. Ivashko]



Fig. 2. "Chinese gazebo" [photo by O. Ushakova]

of Tsarskoye Selo Catherine's Park is based on a combination of a smaller regular planning area and almost twice the size of a more picturesque landscaped area with picturesque outlines of water bodies, curvilinear paths and picturesquely inscribed small architectural forms-pavilions.

The regular park is based on the principles of the French Royal Regular Park, while in the landscape there is a tendency to the principles of the English landscape park with its maximum naturalness.

The main part of the park is a regular part, compositionally subordinated to Catherine's Palace. The system of regular planning paths and two small symmetrically located reservoirs are subordinated to the central axis, which is oriented to the main facade of Catherine's Palace. Catherine's Park has 29 buildings and small architectural forms – permanent buildings, pavilions, gazebos, sculptures, 10 of which are located in the regular part of the park, and 19 in the landscape.

In the regular part there are representative buildings and structures – first of all a refined and pompous palace, pavilions "Upper Bath" and "Lower Bath", "Cold Bath" with "Agate Rooms", "Cameron Gallery", pavilion "Hermitage", "Hermitage Kitchen" (Red Gate), "Sea Column", gate "To my kind comrades-in-arms" and the pavilion "Grotto".

In the irregular landscape there are pavilions "Admiralty", "Hall on the Island" of the Great Pond, "Chesmen Column", "Marble Bridge", "Turkish Bath", "Pyramid", "Red (Turkish) Cascade", "Ruin Tower" and "Gothic Gate", "Gatchina (Orlov's) Gate", "Granite Terrace", fountain "Girl with a pitcher", "Concert Hall", "Ruin Kitchen", "Chinese (Creaking) gazebo", a monument to Lanskoj, "Own garden", "Cahul obelisk".

Both in the regular and in the landscape part, ordinary pavilions are combined with ideologically significant objects. Thus, no part of Catherine's Garden can be considered an example of a "private" garden.

The following motives are present in the architectural style of the park itself:

- European Baroque (Catherine's Palace, Pavilion "Hermitage", Pavilion "Grotto" on the shores of the Great Pond);
- Classicism ("Cold Bath" with "Agate Rooms", "Cameron Gallery", pavilions "Upper Bath" and "Lower Bath", "Sea Column", gate "To my kind comrades-in-arms", pavilion "Hall on the island", "Chesmen column", "Marble Bridge" (Fig. 3), "Gatchina (Orlov's) Gate", "Granite Terrace", "Evening Hall", "Concert Hall", "Kitchen-Ruin" (Fig. 4), "Cahul Obelisk");
- historicism with a combination of motifs of classicism and pseudo-Gothic ("Hermitage Kitchen (Red Gate)", stylization of pseudo-Gothic motifs ("Admiralty", "Gothic Gate"), oriental style ("Turkish Bath", "Tower-ruin"), stylized ancient style (Funeral pavilion "Pyramid" for the burial





Fig. 3. "Marble Bridge" [photo by O. Ushakova]



Fig. 4. Kitchen-Ruin" [photo by O. Ushakova]

dead dogs of Catherine II), Chinoiserie style ("Chinese (Creaking) gazebo") (Fig. 2).

You can analyze the size of buildings and small architectural forms in two parts of the park:

- 1) the regular part includes both large buildings with several floors (Catherine's Palace, "Cold Bath" with "Agate Rooms", "Cameron's Gallery") and smaller buildings (pavilions "Upper Bath" and "Lower Bath", Pavilion "Hermitage", "Hermitage Kitchen (Red Gate)", pavilion "Grotto");
- 2) the irregular part includes both the building complex ("Admiralty") and mostly small buildings – pavilions "Turkish Bath", "Tower-ruin" with "Gothic Gate", "Evening Hall", "Concert Hall", "Kitchen-Ruin") and gazebos ("Chinese (Creaking) gazebo"), as well as other architectural forms, "Marble Bridge", "Red (Turkish) Cascade", "Pyramid", "Gatchina (Orel) Gate", "Granite Terrace", fountain "Girl with a pitcher").

- 3) In both parts of the park there are symbolic memorial obelisks and columns – in the regular part – "Sea Column", in the irregular landscape part – "Chesmen Column" and "Cahul Obelisk". "Sea Column" is located near the Great Cascade Ponds, "Chesmen Column" – in the middle of the Great Pond, "Cahul Obelisk" – near the southern facade of the Zubov's wing of Catherine's Palace. All columns and obelisks are of memorial significance and honor the victory of Russian troops over the Turkish army.

An example of a "private" imperial park, devoid of such officialdom, can be considered Alexander's Park. There are no ideologically significant pavilions and monuments in this park.

"Alexander's Park" is actually located behind St. Catherine's Palace and is separated from the irregular part of St. Catherine's Park by the so-called "Sub-Whim Road". It is also divided into a regular part near the rear of Catherine's Palace and Alexander's Palace, and a landscape part, almost three times larger. The main buildings and structures of the park are concentrated in the regular part:

- in the regular part ("New Garden") – complexes ("Chinese Village"), large buildings (Alexander's Palace with Kitchen Building), pavilions ("Big Whim", "Little Whim", "Chapel", "Chapel", greenhouses, "Chinese Theater") bridges (Big Chinese Bridge, Chinese bridges, Cross Bridge, Shaking Bridge, Dragon Bridge), small forms (curtain "Small Mushroom", "Children's House"), landscape elements (Mount "Parnassus");
- in the landscape part – pavilions ("White Tower", "Arsenal", "Retirement Stable", a horse cemetery, a pavilion of llamas) and Krasnoselsky (Elephant) Gate.

The following styles are present in the architecture of the pavilions of "Alexander's Park":

- historicism – Chinoiserie style ("Chinese Village", "Chinese Theater", "Big Whim", "Little Whim", "Great Chinese Bridge", Chinese Bridges, Cross Bridge, Shaking Bridge, Dragon Bridge), pseudo-Gothic ("White Tower"), "Chapel", "Arsenal", pavilion for llamas, "Retirement Stable", Imperial Farm, Krasnoselsky (Elephant) Gate);
- Classicism-Empire style (Alexander's Palace, «Children's House»).

Architectural structures are successfully complemented by natural landscape paintings (curtain "Small Mushroom", Mount "Parnassus"). A comparative analysis of the two imperial parks shows the gradual formation of two types of aristocratic parks – "official" and "private".

The main principles of the park composition, which became a model to follow in the "official" parks, were as follows:

- the possibility of combining regular (usually earlier) and irregular landscape parts;
- orientation and subordination of the main paths to the main palace building;



- inclusion in the planning of artificial or natural reservoirs, arrangement of artificial mountains, rocks, embankments, often topped with a light gazebo;
- formation of landscape sceneries using different species of trees and shrubs, or creating curtains of trees and plants of the same species;
- completion of alleys and platforms with an accent element – pavilion, sculpture, obelisk, column;
- a combination in the park structure of elements with symbolic memorial significance and elements for recreation and entertainment;
- multi-style (Baroque, Classicism, Empire, Historicism – Chinoiserie style, pseudo-Gothic, Turkish style);
- a gradual departure from the traditions of the regular French park of the seventeenth and eighteenth centuries in the direction of irregular English park of the second half of the eighteenth century.

At the same time, in the depths of the park of Classicism-Empire style with its pomp, sophistication of luxurious pavilions, ideological component, the opposite phenomenon arose – the reaction to this pomp and regulation of all spheres of life – which was called "Ossianism" and rejected the regularity, regulation, stereotypes, emphasized aesthetics, perfection of the artificial environment, but instead turned to sensuality and the human subconscious.

#### **Oleksandriia Park – a park of Classicism-Empire style**

Oleksandriia Arboretum is located in the city of Bila Tserkva, near Kyiv. The park was founded in 1793 and is considered the largest in Ukraine, with an area of 201.5 hectares. The natural water massif of the Ros River and ponds, green spaces and small architectural forms were combined in the planning of the plain area (Fig. 5). The owner of the park was the favorite chambermaid of Catherine II, Aleksandra Branicka, niece of Prince Grigory Potemkin, who lived with her husband all year round, except summer, in St. Petersburg, in addition, traveled extensively in Europe. It is clear that the model for the park were the imperial parks of St. Petersburg and European capitals of the Classicist period. Branicka named the new park in her honor – "Oleksandriia".

The compositional conception of the park has changed many times. Initially, it was conceived by the owner as a kind of landscape memorial in memory of her deceased uncle, Prince G. Potemkin, with his mausoleum – the park dominant. However, due to the negative attitude of the heir of Catherine II Paul I to the person of Grygory Potemkin, the Branycki family was removed from the court, and therefore the idea of a park with a mausoleum had to be abandoned. According to I. Starov's project, several buildings were built and well-known specialists in landscape art were invited from Europe.

The master plan of the park with pavilions was developed by the French landscape architect Muffot,

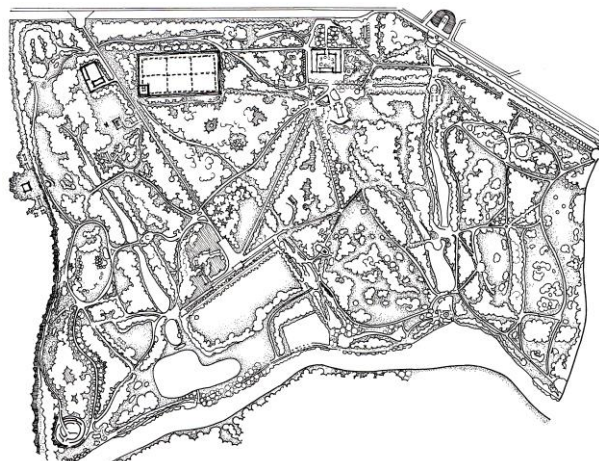


Fig. 5. Oleksandriia Park. Plan [drawings by P. Chang based on the materials of Yu. Ivashko's stocks]



Fig. 6. "Rotunda-shell" in memory of G. Potemkin [photo by Yu. Ivashko]



Fig. 7. Amphitheatre-colonnade "Echo" [photo by Yu. Ivashko]

according to his designs, in addition to local plants and trees, many trees and plants were imported from other countries. A significant contribution to the organization of the Oleksandriia Park was made by a young gardener August Yentz, who came to Bila Tserkva in 1815 and worked on the park for 54 years, creating unique landscape compositions (some of them have survived to the present day, in particular, the Small and Large meadows). Grateful owners honored the gardener's merits in honor of the gardener's half-century of dedicated work with a cast-iron column in the park, which is called the "Yentz Column".

In addition to Muffot and Yentz, architects and gardeners Stange, Bartecki and Witt took part in the creation of the park. They contributed to the realization of Muffot's general conception of and directly, together with Yentz, laid landscape compositions based on the existing local natural landscape – the local oak grove on the banks of the river Ros. Landscape planning continued simultaneously with the construction of small park pavilions and the construction of the Branickis' residence "Austeria" – first a summer residence, and later at the same time a winter one. A number of pavilions were built near "Austeria" – "Monarchical", "Dance" and others. Auxiliary buildings surrounded the main palace on the northern, eastern and western sides. To date, this main representative part of the park has not survived. Not far from the "Austeria" there was an economic yard, which housed the housekeeper, who actually managed the park, there was a greenhouse, flower beds, an orchard, houses for workers working in the park, there were ponds where fish were raised to the count's table.

According to historical evidence, the greenhouse was unique, where exotic plants grew – cacti, orchids, Chinese roses, fruit-bearing pineapples, figs, citrus crops, grapes imported from Italy. The professional skill of gardeners was also manifested in the fact that exotic fruit trees were protected by a brick wall from the cold western winds.

The general ensemble of the park consisted of parts with a separate name – Tsar's Garden (where trees were planted by members of the imperial family), Wall Garden, on the east side – Wedge Garden, Catherine II Garden, Friendship Garden (Potemkin), Russian Garden.

On the territory of the park such buildings and structures as "Rotunda-shell" in memory of G. Potemkin (Fig. 6), amphitheater-colonnade "Echo" (Fig. 7), Chinese Bridge with gazebo, "Ruin", Arch Bridge were erected, "Island of Mary" with a sculpture of the Virgin Mary, "Island of Roses" were arranged, fountains, bronze and marble sculptures were installed, artificial waterfalls were arranged.

One third of the park area was occupied by the western part, separated by a road from the economic yard and taken to the forest park and hunting area (the so-called Zvirynets, modelled on the Alexander's Park of the Tsarskoye Selo residence).

The harmonious combination of artificially created landscape paintings with the landscapes of the local river

Ros led to the fact that Oleksandriia Park became one of the best European landscape parks of this period.

The "Garden of Friendship" in the eastern part of the Oleksandriia Park was symbolic – with a "Rotunda-shell" with a bust of Grigory Potemkin and an epitaph glorifying his services to the Russian Empire and as a benefactor of Countess Branicka.

The luxury of the "official" park attracted famous visitors – in the 19th century Oleksandriia Park was visited by members of the imperial family, famous Russian and Ukrainian writers and poets, famous Polish artists and poets, for whom the park became the subject of their literary and works of art. Jan Browinski wrote a whole poem "Alexandria", Jan Lippoman wrote a verse about the park, the landscapes of the park were immortalized by artists Willibald Richter, Napoleon Orda, Michalina Berzyska, Feliks Brzozowski. The main works of art that glorified the park were created in the period 1820–1840. This evidence has become a valuable source of information about the stages of development of the park and park buildings.

With the abolition of serfdom in 1861, the lack of free labour led to a slowdown in the park, so until 1917 there were no radical changes, development of the park. The descendants of Countess Branicka just maintained existing status. Also with the advent of new capitalist relations due to economic reasons, the fashion for huge aristocratic parks in the estates gone away. As of the beginning of the 20th century, the path in Oleksandriia Park was in need of repair, the straits between the islands were overgrown with duckweed, the Ruin Pavilion was in a state of disrepair and was not being rebuilt.

Three generations of Branicki counts were involved in the planning of Oleksandriia Park. After the death of Countess Aleksandra Branicka in 1838, the estate with the park was inherited by her son Władisław (1783–1843), later grandson Władisław (1826–1884), the last owner of the park until 1917 was Władisław's wife Maria from the Sapieha family.

Unfortunately, to date, many pavilions and buildings have not survived and we can imagine their appearance and style only from the paintings of that time. For example, we learn about the style of "Austeria" from a drawing by Ignatius Wroblewski of the 1890s. This is a two-storey building in the style of classicism with a four-columned portico and a triangular pediment, quite simple in appearance and unlike other palace buildings of its time. The interiors were just as simple – the owner did not attach much importance to the luxury of architecture, but instead invested heavily in the arrangement of the park – but all visitors noted their comfort and friendliness of the hosts. The simplicity of furnishing was due to the fact that the main valuables were stored in the park pavilions and in the treasury in Bila Tserkva.

Before World War I, the palace was overhauled, and in the photographs of the interiors of the Austeria at the time, we see a change in the furnishing of the Empire to decoration in the style of historicism.



The main difference between the Oleksandriia Park and the parks of the Tsarskoye Selo residence was that due to the fact that it was planned later, when the fashion for regular parks was gone, it was created based on the principles of English landscape park and has no regular part. The term "Anglo-Chinese Park" can be used to some extent in Oleksandriia Park, as there were decorative compositions of boulders and artificial hills, picturesque ponds with water lilies, a bridge between the two of them was crowned by the "Chinese Gazebo".

Thus, in the architectural style of the park there are the following motives:

- classicism and Empire ("Rotunda-shell" with a bust of Potemkin, "Austeria", "Monarchical Pavilion", amphitheater-colonnade "Echo" (it overlooked the windows of the owner's bedroom), "Tsar's Pavilion", "Dance Pavilion", "House Pavilion", sculpture "Greek Warrior", "Mercury", "Diana", fountain, vase);
- historicism with a combination of motifs of classicism and eclecticism ("Ruin"), simplified oriental style ("Turkish house"), Chinoiserie style (Chinese bridge with "Chinese gazebo" and sculptures);
- columns (column of sorrow – "Pelican", column "St. Petersburg Meridian" ("Globe"), "Column of Yentz", memorial sign).

#### **Sofiivka Park – an example of "Ossian Park"**

Another phenomenon in the landscape art of the period under study was the park "Sofiivka", which is a type of "Ossian park", i.e. "private".

An important feature of Macpherson's "Ossianism" (in D. Likhachev's terminology) was his influence on the creation of a special direction in landscape design – the so-called "Ossian parks", an example of which is the Sofiivka Park in Uman. The canons of such a park were gradually formed:

- emphasized melancholy and sadness of landscapes: created by arrangement of grottoes, columns of sorrow, mourning sculptures, crypts with epitaphs, pavilions or obelisks in honor of deceased loved ones, the introduction of the names of pavilions, grottoes, obelisks on ancient Greek and medieval burial themes;
- the severity and solemnity of wildlife ensured by creating compositions of giant boulders and rocks;
- lack of bright colors, creating dark parts with a dense shade of conifers;
- creating a mood of thoughtfulness, sadness, thoughts about the ephemerality of life;
- use as the main components of large blocks of granite, moss, spruce, as buildings – pavilions, monuments, ruins, as if living souls of the dead, obelisks, usually somehow related to the theme of vulnerability to gloomy natural forces and death;
- a common landscape technique is the visual instability of compositions of giant boulders, which seem to be about to fall from a height;

- another landscape technique of "Ossian parks" is the location in the open space of the shore or meadow of a single mighty hermit tree, usually oak, as a symbol of longevity, which is a witness to the past;
- "Ossian Park" was supposed to create the impression of coexistence in the real and unreal space, when the shadows of the dead seem to sweep over everything and their quiet voices are felt, the feeling that life, like happiness, is only a moment in infinite time.

An example of the "Ossian Park" is the park "Sofiivka" in Uman, created in 1796–1802 (in some sources the date of foundation of the park is 1800 and it is noted that in May 1800 the Polish Count Stanisław Potocki gave it to his wife Zofia) [12].

The actual simultaneous creation of a unique arboretum with more than 3323 species of local and imported trees and plants contributed to the impression of the integrity of the conception.

If in the case of the Oleksandriia Park it is fair to speak of a certain influence of the Tsarskoye Selo residence, the model for the Sofiivka Park was the Arcadia Park in Nieborów estate of Princess Radziwiłł.

Polish military engineer Ludwig Metzel supervised the planning of Sofiivka Park, the best gardener was invited from abroad, and thousands of Potocki's serfs performed the work. Potocki dreamed of turning Sofiivka into the Europe most famous park.

In fact, the unique park was formed in a picturesque ravine with natural springs. At the time of the park's creation, the ravine was almost devoid of trees and was divided by the Kamianka River, natural beams and canyons, and granite boulders emerged.

It should be noted that Metzel made the most of the features of active natural relief when creating the park, but the general plan was not created in advance; landscape scenery were corrected and created on site (Fig. 8). According to the general composition, a number of independent ponds, pools, waterfalls, locks, cascades and the "underground river Acheron" passed along the natural course of the Kamianka River. As required by the canon of "Ossian parks", one of the dominant was the theme of massive granite boulders and rocks (Lefkada Rock, Tarpeian Rock), there were grottoes ("Grotto of Venus", "Nut", "Grotto of Fear and Doubt"). Among the natural landscapes gazebos and sculptures, mostly pseudo-Greek, were picturesquely scattered.

In the case of Sofiivka, we can talk about the creation of perspectives and landscapes of different plans, which was achieved by arranging different species of trees, ponds, rocks and architecture (Main Avenue, English Park, Champs Elysees, etc.).

As Sofiivka Park is located in a deep natural ravine, this led to the terracing of the slopes and the location of alleys in three tiers. Cascades fell from high cliffs; the "highlight" was the invisible "underground river" – a canal through which, in complete darkness, visitors sailed in boats to the pond.

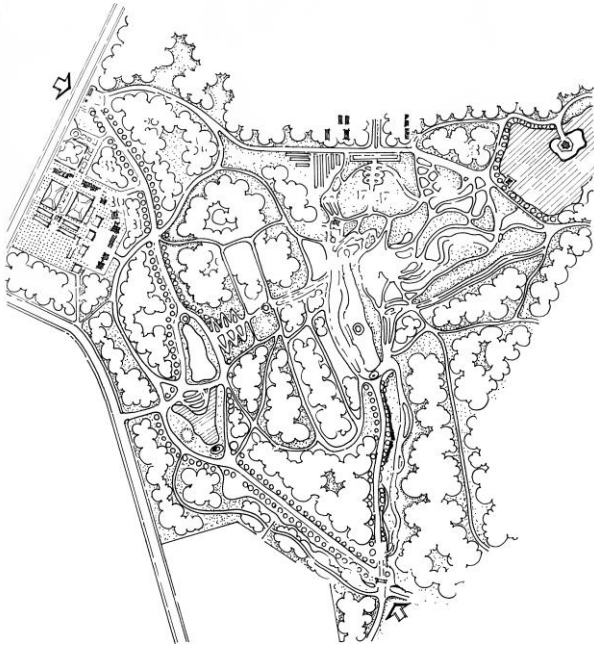


Fig. 8. Sofiiivka Park. Plan [drawings by P. Chang based on the materials of Yu. Ivashko's stocks]



Fig. 9. "Tarpeian Rock" with a gazebo  
[photo by Yu. Ivashko]

The next, second, stage in the history of Sofiiivka Park is connected with 1832, when after the suppressed Polish uprising all the Potocki's estates were first transferred to the Kyiv State Chamber, and in the same year Emperor Nicholas I presented Sofiiivka Park to his wife Alexandra Feodorovna, so this park began to be called "Tzarina's Garden".

The third stage of the park's history dates back to 1836–1859, when the park continued to be called "Tzarina's Garden", but was subordinated to the Office of Military Settlements and underwent significant changes, including widening and paving the main alley, hydraulic works, construction in 1841 of two gazebos – "Small Mushroom" and "Chinese gazebo", in 1842–1845 – construction of the "Pavilion of Flora" designed by architect Raponet, in 1843–1845 – "Pink Pavilion" on the "Island of Anti-Circe", in 1844 – two Gothic towers, later replaced in 1850–1852 by towers in the ancient style (the project was developed by A. Stakensneider, supervised by Uman architect Makutin). At the same time, the "Grotto of Apollo" was filled up on the "Terrace of the Muses" and the obelisk "Eagle" was erected.

In the third period, landscape work was supervised by gardeners P. Ferre (author of the terrace on the shores of the Lower Lake and the "Terrace of the Muses" near the source of Hippocrena) and Bosier (author of a long-distance view from the amphitheater on the "Lower Lake", created by reducing tree tops).

The fourth period in the Sofiiivka Park history is connected with the transfer of the park according to the Emperor's order of 1859 to the Russia Main School of Horticulture, transferred from Odessa to Uman.

Along with the name "Tzarina's Garden", the name "Uman Garden of the Main School of Horticulture" is officially used. Since 1899, work has been carried out to add new rare trees and shrubs to the English Park, and work has been carried out to clean up the greenery. In the fourth period, the history of the park is associated with the names of prominent gardeners of the Russian Empire.

Although Sofiiivka Park is considered a model of the "Ossian Park", it does not emphasize the features of northern nature, as in Macpherson's works or Monrepos Park, but the theme of ancient Greek mythology and Homer's poems "Iliad" and "Odyssey", although the canonical atmosphere of sadness, melancholy and gloomy landscapes of the "Ossian Park".

The park consists of several semantic parts – South, Central, East, West and North. In the southern part there are towers of the central entrance with the entrance gate, which was supposed to symbolize both the entrance to the Athenian market and the details of the Temple of Vesta in Tivoli.

In 1841, a wooden gazebo for guard ("Small Mushroom") was built on the territory of the meadow. Along the central alley from the main entrance to the "Tarpeian Rock" there were groups of spruces and swamp cypresses planted in 1891 (the so-called "Little Switzerland").

To the right along the Main Alley the "Tarpeian Rock" is situated, topped by a light elegant gazebo (1839) (Fig. 9).

The alley ends with the "Pavilion of Flora" with the area in front of it, from which the paths depart (Fig. 10). In front of the "Pavilion of Flora" in the style of





Fig. 10. "Pavilion of Flora" [photo by Yu. Ivashko]



Fig. 11. "Calypso Grotto" [photo by Yu. Ivashko]

classicism on the right source "Silver Springs" is located, decorated in antique style, with two vases.

The road leads through the "Venetian Bridge" to the "Upper Lake" and to the building of the former Main School of Horticulture (now – Uman Agricultural Academy), as well as along the greenhouses to the viewing platform near the obelisk.

You can go up the Upper Alley to the Bellevue Terrace and return to the square near the "Pavilion of Flora". This part of the park was intended for both walking and carriage rides.

The second road from the "Pavilion of Flora" rises steeply and leads to the entrance area of the park from the Kyivska Street, to the meadow "Dubynka" and to the western part of the modern landscape planning.

The lower alley runs along the shores of the "Lower Lake".

The main stylistic idea of the Central part was to present images and plots of ancient mythology of ancient Greece and Rome.

The Venetian Bridge is located in this part of the park. There is the fountain "Snake" in the middle of the "Lower Lake". On the "Lower Alley" there is a sculpture of Hermes, which since 1800 has repeatedly changed its location. "Lower Alley" ends with a sculpture of the ancient Greek poet and playwright Euripides.

In the Central part the "Source of Hippocrena" is located, dedicated to Apollo and the Muses. A sculpture of Venus, moved from the Apollo Grotto, was erected near the spring in 1851 on a square pedestal, below which there was a spring that fills a bronze half-cup.

The metal bridge leads to the "Meeting Square"; it offers a view of the "Great Waterfall", which existed from the beginning of the park, as well as the garden "Meeting Square" on the oval peninsula. However, the organization of this area has changed.

To the left of the "Meeting Square" there is the "Grotto of Fear and Doubt" or otherwise – the "Grotto of Tantalus" with granite block above the entrance weighing more than 300 tons. A marble statue of Cupid once stood above it.

Above the "Meeting Square" along the granite depth granite stairs rises, on the left is the "Western Grotto", or "Scylla Grotto" of pink granite. To the right is the Belvedere viewing platform carved into the rock at the edge of a steep cliff.

The site got its name due to the location of the sculpture of Apollo Belvedere. From where there is a view of the lower part of the rock, resembling a male profile – according to legend, or of Ludwig Metzel, or of Stanisław Potocki himself.

The area above the Belvedere Rock is called "Caucasian Hill" and there was a marble sculpture of Tadeusz Kosciuszko. Instead, in 1850 a bronze sculpture of Empress Alexandra Feodorovna by the famous sculptor V. Sherwood was installed (later this sculpture was transferred to the Hermitage).

In the eastern part there are granite stairs to the grotto "Lokotok" in honour of the King of Poland Władysław I Łokietek and "Nut" with a granite bench and a waterfall nearby, which existed since the beginning of the park. The grotto "Nut" completes the Valley of the Giants section.

The bridge over the Kamianka River leads to the Tempe Valley with allegorical scenery: 9 birches symbolized Potocki's children, three of whom died in infancy and were honoured with an obelisk – "Truncated Column" with a stone resembling a sleeping lion. The nearby stream is divided into three symbolic small waterfalls – "Three Tears".

Busts of Plato, Aristotle, Homer and Socrates are located on a granite pedestal in this part of the park.

In the eastern part there are the so-called "Champs Elysees" with a composition of natural granite boulder

and granite column. In the depths of this area in the meadow is a granite vase on a granite pedestal, and to the right of them – a section of stones of different sizes, covered with moss. Initially, this area with stones was called the "Cretan Labyrinth". To the right there are three withered white poplars, the so-called "family trees".

To the east of the Champs Elysees there is a grotto carved in natural rock – "Lion's Grotto" or "Calypso Grotto", where on the wall near the entrance are the lines of Stanisław Potocki in Polish "Forget here the memory of misfortune and accept happiness from heaven, if you are happy, then be even happier" (Fig.11).

Further along the alley the "Grotto of Thetis" (Venus) is located, with a vestibule of four columns that support a granite slab and a semicircular window, and inside the grotto is decorated with a sculpture of Medici Venus. There is a sculpture of Apollo of Florence to the right of the "Grotto of Thetis".

There is the "Pheasant Pavilion", round in plan, to the left of the "Grotto of Thetis". It was built in 1812. Inside the pavilion there is a pool with a fountain in the centre.

In the northeastern part of the Sofiiivka Park there is the "Upper Lake" with the "island of Anti-Circe" or "Island of Love", created in the first period of the park arrangement. The island is artificial and its correct oval shape provides long-distance views. The shores of the island and the shores are lined with granite. Until 1853, the island was delivered by ferry or boat, and in 1853 a wooden footbridge was built between the north coast and the island on stone supports.

Initially, there was a pseudo-Gothic pavilion on the island, on the site of which in 1850, by order of Nicholas I and designed by Andrey Stackenschneider, the "Pink" pseudo-Renaissance octagonal pavilion was built.

The original hydraulic structure is the two-part Amsterdam Gateway on the shores of the Upper Lake, which belongs to the first period of the park arrangement and is designed to allow boats from the Upper Lake to the Acheron Underground River and vice versa, as well as for descent water from the lake. "Acheron Underground River" also belongs to the first period; it is 223 m long from the Upper Lake, 3 m wide and 3 m high, the water depth is 1 m. Minimal lighting and aeration are provided by 4 light hatches.

The western part of the park starts from the entrance from Kyivska Street. On the slope below the "Lower Lake" there is a natural oak grove "Dubynka", where once grew an oak forest, but since then only one old 400-year-old oak tree near the wooden "Chinese gazebo" has survived.

All other trees are less than 200 years old and have been planted at different times. Earlier in this part was the so-called "Greek Forest", which gave the name "Greek Ravine", which stretched through the park along its southern border. The last trees in the upper part of the "Greek Ravine" were cut down in the early twentieth century.

In the northern part of the park there is the "English Park" with a maze of paths, which occupies a small triangular in plan area of about 2 hectares.

Here is the "Parterre Amphitheater" and greenhouses. The area in front of the greenhouses is arranged in a regular style on several levels: the upper part – clipped lawns of regular shape and flower beds of roses, the middle part is formed by a granite wall and a wide horseshoe-shaped alley that surrounds the sloping part of the slope.

Originally, this was the main entrance to the park, and then this area was called "Valley of Roses". In 1910, the regular part was limited to thuja trees planted in that year, up to 1 m high.

During the first period of the park's development, the Seven Jets Fountain was created in the form of a small round pool with a bronze vase inside, from the center of which water jets flowed. Behind the fountain was a sculpture "Winter", which depicted an old man who protects himself from the cold, wrapping in a chiton.

Below the "Parterre Amphitheater" is the "Terrace of the Muses", which in 1856 erected a granite memorial obelisk in honour of the visit of Emperor Nicholas I, decorated with a gilded eagle.

Sofiivka Park is the only one of the considered parks, which during its existence was created as a "private"; after the confiscation in 1831–1859, despite the formal 4-year ownership of the wife of Emperor Nicholas I, Alexandra Feodorovna in 1832–1836 was managed and developed as an "official" park in the worst sense of the word, as it was subordinated to institutions very far from the concepts of beauty and harmony – first to the Kyiv State Chamber, then to the Ministry of Military Settlements; and finally since 1859 considered parks passed into the status of "public", the park at a specialized educational institution. Other parks considered in the article received a similar status only after 1917.

## Conclusion

The analysis of three outstanding parks in the Russian Empire illustrates both the genesis of landscape art from the end of the eighteenth to the end of the nineteenth centuries and the gradual identification of two opposing types of aristocratic parks – "official" and "private". The quintessence of such a "private" park is the "Ossian Park", based on the canons opposite to the parks of Classicism-Empire.

The study also shows that in this period, especially in the late 18th – first third of the 19th century, both monarchs and aristocrats used the creation and development of parks as a means of self-realization, so the main elements of parks bear the imprint of personality their owners – Catherine II in Catherine's and Alexander's Parks, Countess Aleksandra Branicka in the Olexandriia Park and the Potocki family in the Sofiiivka Park.

Empress Catherine II was engaged in arranging both "official" Catherine's and "private" Alexander's Parks with the same energy and enthusiasm, as well as strengthening the Russian Empire as a whole and creating a developed imperial ideology. Numerous obelisks in honour of the victories over the Turks were built by order

of the Empress not only as a state necessity – she was really proud of these victories, including them in her personal achievements.

However, the state imperial machine, the development and strengthening of which Catherine II gave a powerful impetus, gradually evolving, created in the Russian Empire so hypercentralized, authoritarian and suffocating social atmosphere, which reached its peak during the reign of Catherine's grandson – Emperor Nicholas I, that even the aristocrats of the empire sought relief from the regulated official life in their own estates, investing a lot of money and effort in the arrangement of private parks.

But even in their estate, not all aristocrats felt entitled to arrange the park only to their own liking, regardless of the officially imposed cultural and ideological postulates. Here a lot depended on the tendency of the owner to "self-censorship". Two opposite examples in this regard are Countess Branicka and Count Potocki.

Aleksandra Branicka, whose position as a court lady depended on the mercy of august personages, was forced to renounce the memory of her uncle, G. Potemkin, only because Emperor Paul I did not approve of this favorite of his late mother Catherine II. However, even during the reign of Alexander I, who praised the leaders of Catherine II, such as Potemkin, instead of the mausoleum of his uncle, Countess Branicka built a fairly neutral "Rotunda-shell" in his honour.

Count Potocki, like his wife Zofia, was born and raised in the independent Poland before its partition between Austria, Russia, and Prussia, and had a very different idea of the limits of his private life and the admissibility of disagreement with official ideology. A statue of Tadeusz Kosciuszko, a Polish national hero and leader of the national liberation uprising of 1794 against Russia and Prussia, was erected in the park. Despite the pardon of Kosciuszko in 1796 by Emperor Paul I and his permission to leave Russia, he continued to be considered a dangerous rebel in official imperial ideology, but the Potocki ignored possible government discontent.

The end of the suffocating era of Nicholas I, the abolition of serfdom and reforms caused by the

disgraceful defeat of the Russian Empire in the Crimean War of 1853–1856, opened opportunities for social life in Russia and opportunities for self-realization of aristocrats outside their estate and ended the era private aristocratic parks. Descendants of aristocratic families continued to care for parks created by their ancestors, considering it their contribution to the preservation of cultural heritage – both family and national – but no longer used them for their own personal self-realization.

A comparative analysis of three aristocratic parks – Tsarskoye Selo residence, Oleksandriia Park and Sofiivka Park illustrates the development of landscape design trends in the Russian Empire from Baroque to historicism-romanticism, when parks for aesthetic pleasure and fun were gradually replaced by private parks for inner contemplation, a kind of meditation and reflection on the finiteness of human life. The image of the artist occupies a special place in the pre-romantic period: it is the artist, using imagination and inspiration, as if creating nature and penetrates into its invisible world.

The opposition of natural and artificial, civilization and barbarism was a reaction to scientific progress and social upheaval. Art from the principle of assimilation of nature passes to the principle of its reproduction, creative rethinking.

Elements of the garden, its rhythm, symbols, were subordinated to the emotional experience of the individual, combined with elements of poetry, literary motifs, and motives of travel, past impressions, memories, uniquely combined in its dynamics and structured in figurative representations. It was assumed that the visitor of the park has a certain stock of knowledge, and therefore the parks of this time live and operate, as D. Likhachev wrote, among "educated visitors". "Thesaurus" of visitors to gardens and parks should be very diverse and include knowledge of different arts. Architecture, painting, poetry and philosophy were combined in gardens and parks, and from time to time they were joined by music. In the process of perception of works of art with the help of imagination and imagination a desymbolization of artistic signs performs.

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**Kopsavilkums.** Rakstā analizēti impērijas un aristokrātisko parku ainavu veidošanas pamatprincipi Krievijas impērijā XVIII–XIX gs. Bija "oficiālie" parki, kas paredzēti augstu viesu apmeklējumam, un "privātie" parki, uz kuriem neattiecas "oficiālā" parka kanoni. Carskoje Selo imperatora rezidencē Katrīnas parks pildīja "oficiālā" funkciju ar atbilstošu funkciju un blakus tam atradās Aleksandra parks – attiecīgi "privātā" imperatora parka funkciju. Katrīnas parks kļuva par paraugu, lai sekotu vienam no slavenākajiem parkiem mūsdienu Ukrainā – Oleksandrija parkam Bila Cerkvas pilsētā. Tiek analizēts Carskoje Selo parka rezidences un aristokrātisko parku kopīgais un atšķirīgais Ukrainā, salīdzināti šo parku plānošanas principi un galvenie to veidojošie elementi. Pamatojoties uz to, tiek noteikti klasicisma stila parku plānošanas pamatprincipi Ukrainā un "ikoniskais" paviljonu komplekts. "Osijas parka" vispārīgie kanoni un to konkrētais iemiesojums tiek analizēts, izmantojot Sofiiivkas parka piemēru Umanā. Tika noteikts, ka uz kanoniem balstītais "Osijas parks" ir pretējs klasicismastila parkiem.

# “Eternal Battle” with Compromises and Constraints: Revitalisation of Medieval Architecture

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**Abstract.** In the interests of the Catholic Church and German merchants, from the 13th to the 14th century, the territories of the present-day Latvia and Estonia, then called Livonia, were Christianized with the methods of the Crusades and included in the international economic processes. The feudal states of the German Order and bishops were established to keep the lands of the conquered Baltic tribes in obedience. Their main task was to guarantee the security of the west-east trade routes and to develop the economy in their own interests. To protect their borders and roads, the German Order, bishops and their vassals built dozens of fortresses, most of which are now in ruins.

The Dobele Castle is a fortress built in the 14th century for the administration of a larger area, consisting of a small convent-type castle and a large courtyard fortified with protective walls to station troops and deploy weapons. As a result of the Livonian Wars, the Duchy of Courland and Semigallia was established in 1562, and the Dobele Castle became the property of the Duke. In the second half of the 16th century, one of the first Lutheran chapels in the Baltics was built in one wing of the medieval fortress, and the Landtag meetings were held there regularly. At the turn of the 16th-17th centuries, the dukes' residential building was erected adjoining the medieval castle. However, since the 1730s, both the castle and the chapel had been abandoned and, by the 21st century, were in ruins.

Respecting the public desire to change the emotional semantics of the castle ruins in the city centre, and in cooperation with the Dobele municipality, the architect Pēteris Blūms since 2008 has been looking for an optimal solution for the conservation of the ruins and revitalization of the chapel. The intensive construction and conservation stage began in 2018 and concluded in 2021 with the revitalization of the chapel and its adaptation to multifunctional applications. Under the leadership of the experienced architect Pēteris Blūms, many technical and technological solutions were developed for considerate treatment of the historical walls and their visual appearance, as well as for the provision of service and comfort that meets modern requirements.

**Key words:** medieval architecture, ruins, conservation, revitalisation, chapel

## Why restore?

In the history of the north-eastern part of Europe the process of Christianisation began in the second part of the 12th century. The territories of the contemporary Latvia and Estonia had already been invaded from the east by the rulers of early Slavonic states of Pskov, Smolensk and Polotsk. The eastern territories of the contemporary Estonia and Latvia underwent Christianisation according to the orthodox Byzantine ritual. The coastline of the Baltic Sea in the north-west marks off Estonia and Latvia, and it is from this direction that Danish and German missionaries, pilgrims, tradesmen and knights at the end of 12th century invaded Baltic territories. German knights and bishops exercised repressive Christianisation, abolished Slavonic tributary obligations, introduced Roman Catholic confession, and secured the border of the Holy Roman Empire in the east of contemporary Estonia and Latvia.

In a very short time – from 13-th to 14-th centuries – the bishops on mission and military organisations established in Latvian and Estonian territories several feudal units – bishoprics and

Teutonic Order states. To defend them, a network of fortifications and an unusually big number of castles of different sizes were built. Evaluating only the most significant castles, Estonian historian of architecture Armin Tuulse considered 62 castles of the Teutonic Order, 34 episcopal castles with 6 fortified monasteries, and at least 37 fortified settlements of their vassals or liegemen [9, 433]. During the First Livonian War in the 16th century between the Teutonic Order and the Russian tsar Ivan the Terrible, and the next Russian invasion during the Northern War in 1710 under the tsar Peter the Great, mostly all medieval castles and fortifications were damaged, and by today 90% of them have turned into “romantic ruins” in Latvia’s and Estonia’s ecosystems, with only about 10 % having been adapted to museums as well as administrative and cultural functions.

The author of the article has chosen the fortified Teutonic Order Master’s castle of the Dobele city (German *Doblen*) as a case study because of its very long history of construction and maintenance, complexity of architectural compounds, and an





Fig. 1. Ruins of the Dobele Castle with a view of the revitalised chapel [photo by the author]



Fig. 2. A.G.W. Petzold. Ruins of the Dobele castle. Water-colour, 1846



Fig. 3. Ruins of the Dobele Castle, 2000  
[photo by the author]

impressive variety of ideas for its revitalisation and adaptation to the cultural needs of Latvia's society nowadays. Why so? When looking for patterns and motivations for revitalisation of the architecture, excellent theoretical basis of various national approaches to regeneration of cultural heritage was found in the book "*Geschichte der Rekonstruktion. Konstruktion der Geschichte*" that followed the Exhibition at the Pinacoteca of Modern Art in Munich 2010. But even this outstanding work with the descriptions of so many case studies may not give a definitive prescript to the Hamlet dilemma – "to revitalise or not to revitalise" one destroyed

monument or damaged artefact of ancient architecture, because the preservation of ruins is the same time an Ideal and Utopia [2, 178].

Already for several centuries poets and artists of the Romanticism had been inspired by ruins. The Estonia-born Baltic German painter August Georg Wilhelm Petzold (1794-1859) as an artist of St. Petersburg Academy of Sciences in 1846 participated on an expedition and created several water-colour paintings with the ruined Dobele Castle [7, 25]. Before the era of photography they helped to fix the condition of the original substance, but at the same time embodied romantic love to artefacts of the past and artificial symbolic flair of a historical monument.

But the photo from 2000 with a contemporary view of the ruins conveys a feeling of emotional depression which in the middle of a growing city creates an unavoidable emotional contrast. The philosophical concept of the revitalisation of the ruined castle came along with the conscious public "drive" that motivated to look on the ruined Dobele Castle as a symbol of indispensable cultural identity and create in the public consciousness a more optimistic emotion that "the process is not finished yet", that "the ruins do not mean stagnation or death".

To what level does the conservation and restoration may invade the original substance? To what stage the reconstruction may be accepted an approach to recreate a historical truth or to build up an illusion of the past? These philosophic questions every National heritage board, historians, architects, restorers had to answer in endless debates with the society and find out compromises with emotional demands and rational solutions considering time, economic and understanding of cultural values.

### First Protestant chapel as a value

At the end of 13th century the local tribal warriors under the pressure of the Teutonic Order gave up, left their Dobele Castle, moved southward and integrated in the territories of the contemporary Lithuania. The erection of the stone-built castle on the castle mound of a previous local Latvian wooden fortification is to be dated by the time of the Teutonic Order's Master Eberhard Monheim's arrival in 1335, and was motivated by a need to defend territories from the pagans. In the chronicle by Hermann of Wartberg, written between 1370 and 1378, this fact is described in the following way "*Anno 1335 idem magister construxit castrum Dobbeleen in carnisprivio contra infideles* [3, 76]. An old plan depicting the situation in 1659 exposes the whole complex of the castle with a spacious yard, buildings for the guard and the housemaster, as well as lengthwise extended residential building of the Duchess Anna of Mecklenburg, built in late 16th-early 17th century and being used until the beginning of the 18th century [4, 328].

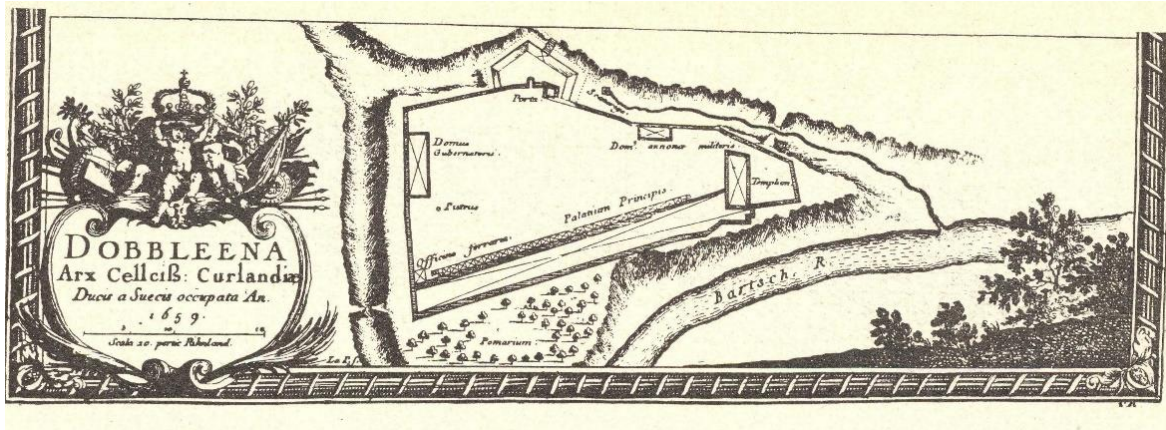


Fig. 4. Plan of the Dobele Castle, 1659



Fig. 5. Steel-and-glass construction as replacement of the ruined wall [photo by the author]

The northern part of the castle shows another building added to the ducal residence as a perpendicular appendix. And this is an essential object for the current article, the chapel. Because of the orientation in the representative and large yard and the excellent visibility of the landscape already in the 15th century, the corners of the medieval castle accommodated four oriel-towers with a very decorative ogive frieze in the Gothic style of the time. But in 1711, the chapel was covered with tiles, and the towers – with roofing iron.

The first Protestant chapel in the Baltic countries, built just a few years after the foundation of the Duchy of Courland, illustrates the result of the ducal prescript from the 28th February, 1567, to establish 70 Lutheran parishes and to build 70 new churches [5, 5]. The Duke of Courland, Gotthard Kettler, was motivated to give a public encouraging example and, in the last quarter of the 16th century, he ordered to transform the former wing of the Teutonic Order's castle and adapt it to serve as an annual assembly hall for the nobility – the Landtag. Historic photographs from 1905 illustrate the ruined chapel with broken vaults and walls, and nobody could imagine that the ducal chapel once had been covered with three magnificent vaults. Looking at the well-preserved Protestant chapels of the Gottorf castle in Schleswig (Germany) and Frederiksborg on

the outskirts of Copenhagen (Denmark) we may imagine a similar picture in Dobele too, because the inventory from 1711 describes the chapel in the following words: “painted altar, pulpit, confessional and benches, marble baptismal font and the ducal box with a fireplace” [8, 128]. Until 1730, some of the premises in the castle were still in use and service was held in the chapel, but very soon after that the castle was abandoned and turned into ruins.

#### How to restore?

Monitoring by the National Board for Protection of Cultural Heritage and protection of authenticity in the chapel ruins present just one side of the coin, while the other is the immaterial gain for the public. In this situation the architect Pēteris Blūms, by launching his project, since 2008 has tried to position the conservation of the ruins as a process that brings back not only the semiotic of the CASTLE amidst the city, but also links the consciousness of the population to an upcoming self-evaluation and understanding that “this is not RUINS any more”, it is something more, asserting life and progress [6, 19]. From the very beginning, when contemplating the methods of protection and revitalisation, the architect P. Blūms did not think of benefits like comfort, heating, ventilation or a possible new function. The initial idea was to protect the authenticity of the entrance, walls, windows and the remaining part of the only oriel-tower. With a view to this, the approach to and methods of conservation have been very innovative.

The crumbled part of the facade wall was not filled up with a similar stone-and-brick mixture imitating the original substance, but replaced with a steel-and-glass construction like a huge window with an additional option for an alternative exit. The broken wall below one of the six windows permitted to accommodate the entrance for disabled persons. The window apertures were closed with neutral steel structures that were filled up with regular glass plates. But each of the window frames is different in size and had to be carefully fitted into the apertures.





Fig. 6. Exhibition room in the former eastern tower [photo by the author]



Fig. 7. Revitalised former chapel [photo by the author]

Three centuries of the ruined building had washed out of public memory the fact that there used to be a basement with windows under the chapel, too. The archaeological excavations cleaned the basement as a utilitarian space and opened the windows that let light in. Every architectural and technical solution is original from the point of view of design, construction and craftsmanship. Technical infrastructure like staff kitchen, WC, lockers and even the underground space of the former basement were made attractive by means of contemporary design and IT solutions.

#### **New old space and its functions**

After the restoration the chapel had turned into multifunctional space for exhibitions, workshops, concerts and other events, but the former eastern tower with the help of metal and concrete

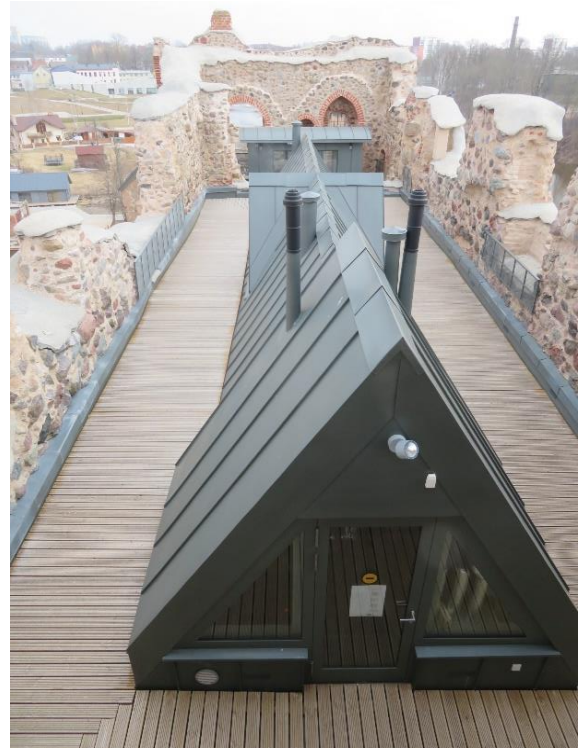


Fig. 8. Sightseeing route and technical equipment on the chapel roof [photo by the author]

constructions was divided into two floors like it had originally been and adapted for two exhibition rooms. One of them, in aesthetically neutral showcases displays the artefacts of the period when during first millennium AD the Dobele Castle served as a fortification for pre-Christian Baltic tribes.

The second exhibition room tells about the history of gardening and pharmacy in the 1630-1640s, when the Duchess Elisabeth Magdalena got very deeply interested in cosmetic and medicinal properties of different flowers, trees and herbs. In 1640, the chemist and botanist Marcus Ruhel reported that roses were in full bloom in the Dobele Castle gardens, in particular the *Province* species. He asked which products the Duchess would prefer to be made of petals: “Rose sugar, syrup, honey or flowers” and added that for the Duchess he had added a bowl of red currants and three figs downed by the wind [1, 41].

The revitalisation of the chapel interior caused the integration of new stairs as well as innovative hoisting steel-and-metal-lath constructions for disabled persons. Niches and former door apertures leading to the medieval latrine were turned into showcases with the help of framed glass constructions while technical pipelines and cables can be visually traced running through the damaged chimney and fireplace in the corner of the chapel. Wooden balks (beams), painted in the colour of the walls, were carefully inserted into holes cut into the original material of the walls.



Fig. 9. Oriel-tower after conservation  
[photo by the author]



Fig. 10. Coverage of the upper part of walls with fibro-concrete  
[photo by the author]

The idea of how to hide the revitalised chapel inside the ruined walls from the outside view was realised with the help of a deepened new ceiling between the outer walls that does not encroach on the outer silhouette of the ruins. Besides, the roof terrace on the ceiling has a double function, offering a sightseeing route for the visitors and displaying the ground heating and ventilation boxes that are otherwise hidden from the spectator.

The highest point of the ruined chapel – the south-west oriel-tower – was first made accessible only during the conservation works in 2016. It surprised the architects by the amount of the damaged walls and fragile original constructions. To stop further erosion it was necessary first to stabilise

the walls, window apertures and decorative details of the tower. Following the studies on late medieval stylistics, the architect Pēteris Blūms used the method of anastylosis to fix the erupted window aperture and the twin arch, and levelled the upper part of the wall. Further, the conservation goal was to devise the construction in order to reinforce the walls of the oriel-tower to the extent that the spiral-shaped stairs and steel columns could support a post-modern spire, to protect the walls from atmospheric pollution and create symbolic decoration for the silhouette of the ruins.

In the course of several approaches to the conservation of the ruins a number of methods for the protection of the upper part of the walls had been tested and applied in the volatile Baltic climate. The oldest and simplest one was to cover the ruined wall with a layer of concrete or cement, or lime mortar. This method has been known already from the 19th century, but it provided only a short-time solution of the problem. The method practised by us over the last 30 years with the coverage of turf put on synthetic canvas of geotextile does not give a long-lasting effect and may cause infiltration of water inside the wall. The contemporary solution used by the architect Pēteris Blūms may bring to mind a similarity with the forms of Antonio Gaudi's "sky garden" architecture. However, separated by a cellular plastic pad, the upper layer of fibro-concrete has been emphasized by our experienced architect as the method with a long-term guarantee. Furthermore, the legitimacy of such an approach has already been demonstrated on other medieval objects of architecture in Latvia.

### Conclusion

Every conservation and, moreover, revitalisation express the characteristic handwriting of the architect, his vision and talent, the result of synergy between the architect and the craftsmen, as well as embody the features of the time and the level of material culture and economics. On the one hand, the case of the revitalisation of the Dobele Castle chapel with the means and approaches of the 21st century fixes the authenticity of the historic substance; on the other hand, it witnesses the gains of the public who may emotionally evaluate the benefits they have obtained. The case study on the conservation and revitalisation of the ruined Dobele Castle serves to illustrate the architect's response to the social demands and documents the contemporary approach to the philosophy of protection of monuments of medieval architecture in Latvia.

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**Kopsavilkums.** Rakstā „*Mūžīgā cīņa* starp kompromisiem un ierobežojumiem: viduslaiku arhitektūras revitalizācija” ir veltīts 14. gadsimtā celtās Vācu ordeņa Livonijā pilsnovada pārvaldnieka – komtura – Dobeles rezidences konservācijas un restaurācijas pasākumu kompleksa raksturojumam. Kopš 2008. gada ir tikusi realizēta arhitekta, restaurācijas teorētiķa un praktiķa Pētera Blūma izstrādātā koncepcija. Pēc pirmsrestaurācijas izpētes ar Eiropas savienības fondēto līdzekļu un pašvaldības finansiālo atbalstu vairāku gadu garumā pakāpeniski ir tikusi īstenota šī pilsētas centrā novietotā viduslaiku arhitektūras pieminekļa konservācija, daļēja restaurācija un revitalizācija. Tās sociālais uzdevums bija jaunā kvalitātē gan emocionāli, gan fiziski atdot Dobeles pilsētas un novada sabiedrībai par neglābjami erodējušu un tādēļ no kultūras pieminekļu atjaunošanas viedokļa bezcerīgu kultūras objektu. Dobeles pilsdrupu kompleksa kā Vācu ordeņa konventa pils saglabāto daļu unikālā vērtība ir 16. gadsimta otrajā pusē par agrīnu protestantu kapelu pārbūvētais korpuss. Saskaņā ar arhitekta Pētera Blūma koncepciju šī pilsdrupu daļa ir tikusi konservēta ar tradicionālām metodēm un aizsargāta no tālākas mūru erozijas. Atsaucoties pilsētas sabiedrības un pašvaldības publiski paustajām domām par pilsdrupu revitalizāciju kā sociāli optimizējošu uzdevumu, restaurācijas projekta autors atrada gan tehnisku, gan vizuāli estētisku risinājumu kā piešķirt kādreizējās kapelas korpusam praktiski izmantojamas ēkas īpašības, nenodarot kaitējumu pilsdrupu autentiskumam un arhitektūras vizuālajam tēlam. Revitalizācijas rezultātā 2021. gadā noslēgušies pilsdrupu konservācijas, restaurācijas un adaptācijas pasākumi ir atdevuši sabiedriskai aprītei viduslaiku sakrālās kultūras pieminekli – kādreizējo pils kapelu. Tās pieejamību gan plašai sabiedrībai, gan apmeklētājiem ar īpašām vajadzībām nodrošina ar mūsdienu tehniskajām iespējām radītas arhitektūras detaļas. Viduslaiku kapelas mūros iegūtā un revitalizētā vairāku līmeņu telpa rada precedentu drupu stāvoklī esoša arhitektūras pieminekļa sociāli atbildīgai adaptācijai par mūsdienu sabiedrību optimizējošu objektu un muzeificētu kultūras norišu vietu.



# Sokyryntsi Park as the embodiment of the "double life" of the Galagan family

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**Abstract.** The history and principles of planning the park of the aristocratic country residence of the Galagan family – "Sokyryntsi" are described. Compared to such parks as Oleksandriia and Sofiiivka, Sokyryntsi Park is much less well-known, although it is a unique intermediate link between the "official" parks of Classicism-Empire style, such as Oleksandriia in Bila Tserkva and "private" "Ossian parks", as Sofiiivka Park in Uman. Although in some sources Sokyryntsi Park with a complex of buildings and structures belongs to the Empire style, but a deeper analysis has shown the simultaneous presence of components characteristic of the "English Landscape Park" and "Ossian Park". The Sokyryntsi ensemble is a unique example in terms of its division into three zones – "parade", "memorial", closed from strangers, and "recreational" on the shores of reservoirs. In addition, this is a rare example of the location directly on the estate of two churches, family crypts and the house of the estate founder. The Sokyryntsi ensemble is a unique example of how the "double life" of the family was subconsciously embodied in the planning and development of the park, where the "parade" part testified to the education of the owners and their role in the Russian Empire, instead, the hidden "memorial" part acted as a "figure of silence" about the shameful deeds of the estate founder. The methods of historical and culturological analysis, method of comparative analysis, method of field surveys with the implementation of dimensional drawings and photofixation were used.

**Keywords:** "Sokyryntsi", Classicism-Empire style, romanticism, intermediate link, "double life" of the owners, planning

## Introduction

To this day, unique aristocratic residences with parks have been preserved in those territories of Ukraine that in the past belonged to the Russian Empire. Some of them, such as Oleksandriia and Sofiiivka are well-known, widely covered in the literature, and have long since become tourist attractions. The notoriety of these residences is a guarantee that the buildings and pavilions are maintained in good condition, as well as ponds, paths and landscapes. Instead, the fate of another unique country residence, which arose around the same historical period as Oleksandriia and Sofiiivka parks, is much more difficult, but in Soviet times due to the inconvenience of location has not become a famous tourist attraction, so many unique pavilions and the church have not survived, and some existing pavilions are in disrepair. We are talking about the architectural and park ensemble in the village of Sokyryntsi, Chernihiv region. That is why, according to the authors, it is necessary to promote this country ensemble as much as possible to promote its preservation, restoration of existing buildings and pavilions and, if possible, the restoration of lost pavilions on the basis of archival photographs.

Due to the lack of comprehensive research of Sokyryntsi Park and scientometric sources, a source base was developed to help solve the tasks. As Sokyryntsi, Oleksandriia and Sofiiivka parks were created during the Classicism-Empire style period, scientific works on the principles of planning and construction of parks of this period were studied in

order to further compare them with the planning and development of Sokyryntsi Park. These are the works of I. Kosenko [8], I. Rodichkin, O. Rodichkina, I. Hrynychak, V. Sergeev, P. Feshchenko [14]. The specific colour of the parks of Ukraine is mainly due to natural and climatic conditions and plants, so the local parks of the Classicist-Empire style era differ from similar parks in St. Petersburg. The thesis that the natural environment can radically change the perception of architectural style was proved in the article by D. Chernyshev, Y. Ivashko, D. Kuśnierz-Krupa, A. Dmytrenko [1].

A characteristic feature of Sokyryntsi Park is that although it is based largely on the traditions of landscape planning of the so-called "English-Chinese" park, unlike the Oleksandriia and Sofiiivka parks, it did not have Chinese pavilions as an integral part of them, but preserved the "English-Chinese" park principles and landscape sceneries.

Similarly, although Sokyryntsi Park is traditionally characterized as an Empire-era park, a deeper analysis of the park's layout revealed some features of so-called "Ossian parks" and specific individual planning features associated with the "double life" of the genus, subconsciously embodied in landscape design.

Sokyryntsi Park is not a typical example of regular parks due to the duration of its planning for four periods and combines regular fragments of both Classicist-Empire style parks in the primary period and (for the most part) romanticism parks and even "Ossian parks" in subsequent periods inclusive to the beginning of the 20th century.



Therefore, the authors elaborated the source base more broadly, with an analysis of publications devoted to the actual Chinese gardens – as prototypes of the "English-Chinese" landscape park. For this purpose, the publications of Y. Ivashko, P. Chang, A. Dmytrenko, T. Kozłowski, D. Mykhailovskyi [3], Y. Ivashko, D. Chernyshev, P. Chang [4], Y. Ivashko, D. Kuśnierz-Krupa, P. Chang [5], Y. Ivashko, T. Kuzmenko, S. Li, P. Chang [6], M. Orlenko, M. Dyomin, Y. Ivashko, A. Dmytrenko, P. Chang [9], M. Orlenko, Y. Ivashko, P. Chang, Y. Ding, M. Krupa, K. Kuśnierz, I.G. Sandu [11], M. Żychowska, Y. Ivashko, P. Chang, A. Dmytrenko, N. Kulichenko, Z. Xin Mu [18] were used.

Also, landscape design of this period was considered from the standpoint of art, so the article was studied by P. Gryglewski, Y. Ivashko, D. Chernyshev, P. Chang, A. Dmytrenko [2]. Given the problems of protection of this unique ensemble and the need to restore the palace and pavilions with the restoration of lost components, there is a need to develop a comprehensive program to revive the ensemble and turn it into a tourist attraction.

The problem is that the ensemble has inconvenient transport connections, which makes it difficult for tourists to arrive. In addition, the Sokyryntsi Vocational Agrarian Lyceum is now located on the territory of the ensemble, and the museum and the management of the lyceum are located in the palace.

As an important component of the regeneration of this unique ensemble in its original form is protection and restoration, relevant scientometric sources were involved. Restoration aspects are covered in the works of M. Orlenko, Y. Ivashko [10], M. Orlenko, Y. Ivashko, J. Kobylarczyk, D. Kuśnierz-Krupa [12], M. Orlenko, M. Dyomin, Y. Ivashko, A. Dmytrenko, P. Chang [9], M. Orlenko, Y. Ivashko, D. Kuśnierz-Krupa, J. Kobylarczyk, O. Ivashko [13], M. Orlenko, Y. Ivashko, P. Chang, Y. Ding, M. Krupa, K. Kusnierz, I.G. Sandu [11], I. Sandu, Gy. Deak, Y. Ding Y. Ivashko, A.V. Sandu, A. Moncea, I.G. Sandu [15], I.C.A. Sandu, P. Spiridon, I. Sandu [16], P. Spiridon, I. Sandu, L. Stratulat [17].

The purpose of the article is to determine the place of Sokyryntsi Park in the heritage of landscape design of Ukraine of the 19th century, to cover the history of its creation, little known to the general public, to analyze the applied techniques of landscape design and compare them with Oleksandriia and Sofiivka Parks.

The scientific novelty of the study lies in a comprehensive analysis of the insufficiently studied park in the context of general trends and trends in landscape design of the 19th century in Ukraine. It is argued that the "double life" of the Galagans, tainted by the betrayal of the estate founder, led to the subconscious embodiment of this "duality" and remorse in the landscaping and development of the park.

## Matherials and Methods

The solution of the research tasks led to the choice of general scientific research methods.

Methods of historical and culturological analysis allowed to analyze the basic principles of traditional

landscape design of the late 18th – 19th centuries, the main components of the two main types of aristocratic parks – "official" and "private" and the principles of their planning.

The method of comparative analysis allowed us to understand how the traditions of landscape design of imperial parks were gradually transferred to aristocratic parks of other territories, to compare common and different between them, to analyze which components disappeared or simplified and which remained. This method allowed a deeper analysis of the role of Chinoiserie style pavilions as an integral part of the aristocratic parks of this period and to determine the degree of their similarity to the original models – Chinese small pavilions in private gardens. Also, the method of comparative analysis allows you to compare the principles of organization of parks of a certain period. The study used the method of field surveys with the implementation of dimensional drawings and photofixation, on the basis of which conclusions were formulated.

The authors investigated the existing state of the Sokyryntsi Park, in particular, the history of the pavilions, recorded the loss of a significant number of objects and, based on a comparison of the original and existing state, provided their proposals for restoration.

## Results and Discussions

History of creation and development of the Sokyryntsi architectural and park ensemble

The method of historical analysis made it possible to trace the history of the park since its creation. The history of the Sokyryntsi ensemble began in 1823–1829, when the landowner Pavlo Galagan built an Empire-style brick palace on the Sokyryntsi estate, designed by architect Pavlo Dubrovskyi, and the Austrian gardener Bisterfeld planned a large landscape park around the palace with numerous small architectural forms – gazebos, a church and a chapel, a dam and two bridges [14] (Fig. 1).

The palace became famous for its unique art gallery, which later became the basis of the collections of the Chernihiv Art Museum. A unique collection of utensils and weapons was collected here. The owners were fans of art, so before the abolition of serfdom in 1861 they had a serf theater and choir, which led to the then name of the Sokyryntsi estate – "Ukrainian Parnassus".



*Fig.1. The main facade of the palace  
[photo from the stocks of Yu. Ivashko, 2019]*



Fig. 2. "Rotunda" on the observation deck  
[photo from the stocks of Yu. Ivashko, 2019]



Fig. 3. Reconstruction of the initial state  
of the ensemble in the local museum  
[photo from the stocks of Yu. Ivashko, 2019]



Fig. 4. Remains of the "Gothic Bridge"  
[photo from the stocks of Yu. Ivashko, 2019]

The unique nature of the park attracted here the national figures of Ukraine of the 19th century – Panteleimon Kulish, Mykhailo Kostomarov and Taras Shevchenko.

The main representative building of the ensemble is a brick two-storey palace – symmetrical in plan, with an internal layout of the enfilade type, consisting of 60 rooms, and topped by a large decorative dome. A wide 400-metre alley, lined on both sides with chunky oaks, led from the main entrance to the palace.

The main facade was decorated with an eight-column portico of the Ionic order on the arcade. The park facade was also representative, with a six-columned portico, from which on the level of the second floor (where the main rooms of the palace were) a ramp, narrowed up and widened down, descended towards the landscape park. This provided a direct connection between the banquet halls and the park. At the end of the 19th century, copies of antique sculptures and decorative vases were installed on both sides of the ramp. Special covered passages connected the palace with two-storey outbuildings.

The area of the estate was formed by representative buildings (gate with a fence, entrance wings in the Empire style, palace) and this area had a regular nature of planning, "regular park". The rest of the estate territory had a picturesque irregular character. To the north of the palace there were farmsteads with cattle, to the east of the palace in the direction of the village there was a straight alley, along which stood a church, chapel, bell tower, which have not survived. A greenhouse, unique for private estates of the Left Bank of Ukraine, is ruined.

Since 1920, the palace housed first an agronomic school, then – Sokyryntsi Agricultural College and Agricultural Vocational School, now it is the building of Sokyryntsi Vocational Agricultural Lyceum.

Since 1972, Sokyryntsi Park has had the status of a park-monument of landscape art.

Despite the fact that in some sources Sokyryntsi Park is considered a park of Classicism-Empire style, it has features of the English landscape park.

The park is based on a forest with ancient trees and plants of about 40 species – oak, birch, field elm, linden, white poplar, hornbeam, maple, larch, spruce, Scots pine and black pine, chestnut, spirea, plane tree, oriental beech, sycamore. The oldest tree in the park is the so-called Shevchenko's sycamore, there is a century-old plane tree near the ramp of the palace.

On the basis of the method of historical analysis, the phasing of the formation of the Sokyryntsi Park was determined. In particular, the planning of the landscape part with an area of 40 hectares lasted in several stages:

- stage 1 (1823–1825) – planning under the direction of Saxon scientist-gardener I. Bisterfeld with the participation of architect P. Dubrovskiy;
- stage 2 (1826–1831) – works under the direction of Redel;

- stage 3 (1834 – the end of the 19th century) – works under the direction of C. Christiani;
- stage 4 (end of the 19th-beginning of the 20th century) – works under the guidance of the Czech gardener K. Janiček, German gardener Pfeiffer and local gardener Yu. Hapon.

Picturesque landscape paintings of this part of the estate were complemented by a church with a bell tower and a chapel, small architectural forms – two gazebos (one of them survived, "Rotunda" of 1829) (Fig. 2), well, dam, Red and Gothic bridges, sculptures. A pond was dug along the Utka River. An important landscape component was the so-called "Holy Valley" – an elongated meadow with steep slopes covered with vegetation.

In Soviet times, a significant part of the park pavilions was lost, secondary buildings for the school were erected, part of the park was planted with reclamation plantations, which led to the violation of the original landscape design of the park.

In 1959, a historical and ethnographic room-museum dedicated to the 150th anniversary of the birth of the famous kobzar Ostap Veresai was established in the palace, which later became a historical and ethnographic museum at the Sokyryntsi Professional Agrarian Lyceum. A monument to Ostap Veresai was later erected in the park. It was possible to reproduce the original composition of the ensemble buildings and establish their location (Fig. 3).

According to the reconstruction of the original composition of buildings and structures on the territory of the Sokyryntsi estate by architect Kosarevskyi, the following buildings have survived: the entrance gate with a fence, watchtowers, the Galagan Palace, a dog monument, a rotunda gazebo, and outbuildings. The stagecoach stable, greenhouse, "Gothic bridge", siphon are in an emergency and destroyed state (Fig. 4).

The water pump, side entrance arch, Peter and Paul Church with a bell tower, St. Barbara Church and numerous crypts with family burials, obelisk, "Gothic gazebo", Hnat Galagan's house, ferry, well, brickyard have not been preserved. Landscape components have been preserved: the main alley lined with oaks, large flower beds in front of the main facade of the palace, plane tree, a large lawn on the courtyard facade of the palace, observation decks, "Holy Valley" with floodplain, dam and spillway on the ponds.

The method of historical analysis and the method of comparative analysis made it possible to determine and argue that the territory of the architectural and park ensemble is divided into three parts:

the main "regular", where the main axis passes through the entrance gate in the Empire style, the central alley framed by trees, the centre of the annular flower bed and the main palace centre with a dome;

the "memorial" part of a certain symbolic meaning, the core of which was the axis between the house of Hnat Galagan and the churches and burials of the Galagan family;

the recreational part behind Hnat Galagan's house – seven picturesque footpaths departed from the site with the house and the whole further area to the ponds inclusive was exclusively recreational, with gazebos and observation decks.

The Classicist-Empire style look of the park facade of the palace is not emphasized by the tracing of paths and the location of park elements and buildings. A huge plane tree is picturesquely located on the side of the entrance ramp (Fig. 5). Behind the park facade there was an open Great Meadow, from which distant prospects for the park facade of the palace open up (Fig. 6). On the sides of the park facade there are paths that run behind rows of tall trees on the sides of the "Great Lawn" and outside the lawn meet on a small site, where probably stood the house of Hnat Galagan, depicted in photographs from before 1917. This site was connected by a straight alley with a "memorial family zone" with family crypts, a church with a bell tower and a chapel. There were also large flower beds in front of the church. The straight alley ended with an arch of the side entrance. Together with the front area, these are two sections of the estate that are regular.

As noted earlier, unlike most aristocratic parks of this period in Ukraine and Russia – in Tsarskoye Selo near St. Petersburg or in Monrepos Park near Vyborg – in the Sokyryntsi Park Chinnoiserie style in architecture is not represented, although in the parks of Classicism-Empire style (Catherine's and Alexander's parks in Tsarskoye Selo residence, Olexandriia Park in Bila Tserkva near Kyiv), and in the so-called "Ossian Parks" (Monrepos Park, Sofiiivka Park) the theme of China is present in some landscape paintings, or even in stylized "China-style" pavilions.

Sokyryntsi Park also is not a typical example of a landscape "English" park, as it has areas of regular planning. The presence of distant views of the key building – the palace – both from the central gate to the main facade and from the lake to the courtyard facade significantly distinguishes this park from the Chinese garden with its lack of distant prospects.

The method of comparative analysis made it possible to consider the Sokyryntsi Park not separately, but in comparison with the phenomenon of English-Chinese parks.

At the same time, in the layout of Sokyryntsi Park near Hnat Galagan's house and greenhouse, there are fragmentary landscape techniques that are related to both the principles of traditional Chinese landscape design and the principles of English-Chinese parks based on them:

- the use of curved paths in the part near the house of Hnat Galagan and to the shores of the ponds (Fig. 7);
- in some parts of the park dense greenery plays the role of natural screens with the impossibility of long-term prospects;
- small architectural forms in these parts of the park are completely subordinated to greenery.





*Fig. 5. Old plane tree  
[photo from the stocks of Yu. Ivashko, 2019]*



*Fig. 6. View of the park facade from the "Big Lawn"  
[photo from the stocks of Yu. Ivashko, 2019]*



*Fig. 7. Landscapes from the shore of the ponds [photo from the  
stocks of Yu. Ivashko, 2019]*



*Fig. 8. Hnat Galagan's House [archive photo of the beginning XX  
century from the funds of Yu. Ivashko, 2019]*

However, in the Sokyryntsi Park at least three features can be identified that significantly distinguish it from other aristocratic parks of the Russian Empire in this period and give it a kind of gloomy color.

The first feature is the dominance of the "religious" theme in the park – there are two churches, a bell tower, a landscape element "Holy Valley", while a much smaller part of the landscape pavilions. In itself, such increased religiosity is not something extraordinary – many landowners in their estates had own churches – but in combination with the following two features, it forms a holistic picture.

The existence of a "memorial zone" dedicated to perpetuating the memory about ancestors is also not unique, it can be found in both imperial and aristocratic parks. However, the presence of 7 family crypts in the park near two churches was quite exotic for the Russian Empire of the 19th century.

Both members of the imperial family and aristocrats, both Orthodox and Catholics, preferred to bury their dead loved ones in the consecrated land of the cemetery.

According to popular belief, the cemetery could not bury the so-called "unclean dead" – this category included people who died an unnatural death, lived an unworthy or defective life, were cursed by their parents (or cursed their children), and those that have been seen in connection with the devil.

Although the clergy tried to combat these prejudices, burial outside the cemetery was considered somewhat suspicious for such respected members of society as members of the aristocratic family.

Burial of family members in the park at the family estate is a rather rare phenomenon, pets are buried there much more often. Examples include the burial of Empress Catherine II's dogs in Catherine's Park or the dog cemetery near the "Childrens' House" and the Imperial Horses Cemetery in a remote private part of the Alexander's Park in the Tsarskoye Selo residence.

The "memorial zone" is also in the Sofiivka Park, however, somewhat different – in the allegorical "Tempe Valley" 9 birches symbolize the children of the Potocki family. Three of them died in childhood and an obelisk was erected in their honour – "Truncated Column" in the style of a tombstone among the thick greenery and a stream with three small falls – "Three Tears". However, there are no real burials in Sofiivka Park.

It should be noted that Sokyryntsi Park differs from the so-called "Ossian parks", where the atmosphere of melancholy is created by symbolic, somewhat theatrical means. There is no theatricality, no symbolic landscape elements in Sokyryntsi – there are real churches with a bell tower and real crypts.

The third feature is an unusual attitude to the founder of the estate (or to the benefactor).

Grigory Potemkin's niece Aleksandra Branicka initially wanted to turn Oleksandriia Park into a memorial park in memory of the famous uncle with his mausoleum, but for political reasons she limited

herself to a "Rotunda-shell" with a bust of Potemkin inside. However, it is significant how this pavilion is decorated and where it is located in the structure of the Oleksandriia Park.

The "Rotunda-shell" is located near the main entrance and is the first building that the visitor meets, passing through the pompous classic entrance along the central alley to a large open lawn. In the middle of this meadow the mentioned pavilion stands, which is the highest pavilion of the park, has a pompous character, caisson ceiling inside, inspires certain allusions to the Rome Pantheon.

This is essentially a symbol of the Potemkin's Pantheon of Glory. This arrangement of the memorial pavilion was not accidental and symbolized who was the benefactress of Countess Branicka.

Now let's compare this example of a "memorial zone" – the most grandeur and open – with how such a zone in Sokyryntsi Park was resolved. The real house of the founder of the Galagans' estate is hidden from the rear of the park area among the thickets, not accentuated by the layout of the main park alleys (Fig. 8).

Alleys are directed to both facades of the palace, instead the house of Hnat Galagan is away from the main paths, around it there are several buildings (Gothic gazebo, obelisk) in the form of funerary monuments, and from the house there is a straight path to two churches and burial crypts.

Thus, in the planning of the estate there is a strange duality: grandeur, logic and openness of the part from the central gate to the palace and a large spacious lawn from the courtyard facade, ie symbols of the venerable family, and behind the palace, in some thickets, hidden from prying eyes, there is the house where the founder of the estate lived and died, from whom the descendants actually had such wealth, around the house there is a quality building with the image of a crypt or a monument in the cemetery, and the house itself is connected by a path with churches and burials.

The origins of the "double life" of the Galagan family in the planning and construction of the estate

The method of historical analysis made it possible to establish the facts of the existence of a "dual meaning" of some objects in the layout of the Sokyryntsi Park and to reveal their hidden essence. It is the highlighting of such unusual landscape techniques, which are not found in other parks of Ukraine, that can turn the Sokyryntsi Park into a special tourist attraction. The obvious presence of real burials with churches near them is in tune with the tragic fate of Galagan family members, who had no personal happiness, and later after 1917 were scattered around the world. The specific tragic colour embodied in this hidden from prying eyes "memorial part" of the park, in our opinion, was associated with the belief in the ancestral curse that weighed on all Galagans because of the shameful betrayal of Hnat Galagan.

The founder of the estate Hnat Galagan lived until 1748 (Fig. 9). He was a representative of the Cossack

officers of the Galagan family, in 1709–1714 he was a Chyhyryn Cossack colonel, in 1714–1739 – a Pryluky colonel. He took a direct part in the Great Northern War of 1700–1721, from 1706 he commanded a regiment in the army of Hetman Ivan Mazepa. At the end of 1708 he betrayed Hetman Mazepa and sided with Peter I. In 1709 he helped Russian troops capture and destroy the Zaporozhian Chortomlyk Sich, convincing the Cossacks not to shed fraternal Christian blood. He also promised royal forgiveness to all those who voluntarily lay down their arms. Those who surrendered, believing him, Galagan ordered to be impaled and let on rafts down the Dnipro to intimidate the population.

Tsar Peter I thanked Hnat Galagan for his betrayal, appointing him Chyhyryn Colonel and providing him with lands and villages near Chyhyryn. In 1711–1712, Hnat Galagan, by order of the Russian tsar, organized the forced relocation of Ukrainians from the Right Bank of Dnipro to the Left Bank. Surviving Cossacks considered Galagan a personal enemy, Sich Cossack psychics (so called "kharakternyks"), according to legend, cursed his entire family to the seventh generation, so he was forced to move to the Left Bank of Dnipro.

In 1714 Galagan received the rank of Pryluky colonel and began to buy property in Poltava region, became famous for extortion from subordinate serfs. He later took part in the military campaigns of 1722 and 1733.

The history of the village of Sokyryntsi (now – Chernihiv region) has been connected with the history of the Galagan family since 1716. This village was first mentioned in the descriptions of the estates of Jeremi Wiśniowiecki in the 1640s. It is known that it arose on the site of a solitary hamlet of Ivan Sokyryka on the river Utkha. In the 18th century the village was a part of the Sribne Hundred of the Pryluky Regiment.

Until 1716 it was a free military village where the Cossacks lived, but in 1716 the Russian government gave it to Hnat Galagan, who considered the place as his residence. At that time the village had 150 peasant yards. As of 1740, there was a wooden church, a school, and a hospital.

After the death of Hnat Galagan in 1748, the estate was owned by his descendants. After the liquidation of the regimental territorial-administrative system in 1782, the village of Sokyryntsi belonged to the Pryluky district, first in the Little Russia province, and from 1802 in the Poltava province.

After the betrayal, Gnat Galagan himself showed his religiosity in every possible way, donating large sums to the church, but it seemed that the Cossack curse continued to weigh on him and his descendants.

Hnat Galagan was married to the daughter of a Kyiv burgher, widow Olena Tadryna (in her first marriage – Oleksandrovykh). He himself died in Sokyryntsi in 1748, and his wife in 1763.

None of his descendants were happy in their married life. His only direct male descendant in the sixth



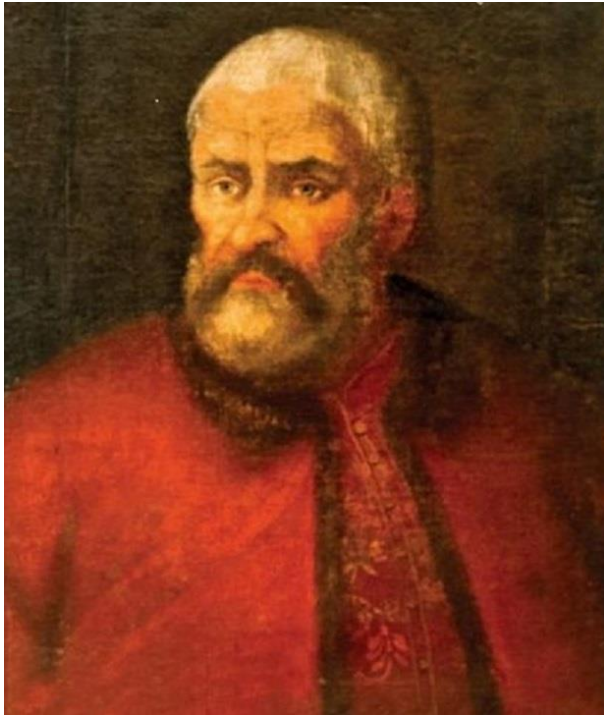


Fig. 9. Portrait of Hnat Galagan. Fragment of a marital portrait. 1740s. Unknown artist. Galagan Collection [Chernihiv Regional Art Museum]



Fig. 10. "Gothic gazebo" [archive photo from the stocks of Yu. Ivashko]

generation, Hryhorii Galagan (1819–1888), son of the Sokyryntsi ensemble founder, tried to end the family curse by becoming a famous ethnographer, a generous philanthropist who advocated the development of Ukrainian national culture and financially supported its activists. He raised his son Pavlo, a descendant of the Cursed Hnat in the seventh generation, a sincere Ukrainian patriot. However, in 1869 his son died suddenly of typhus at the age of 16. In 1871, Hryhorii Galagan founded a secondary school for boys in Kyiv in memory of his son. With the death of Hryhorii Galagan, the Galagan family ceased to exist in the male line (as, in fact, was noted in the legendary curse), and all the lands were inherited by his sister Maria Pavlivna.

As of 1903, Sokyryntsi had the status of a volost (county) centre with 4,000 inhabitants, two churches, a lively trade and 60 mills. At the beginning of the 20th century, a zemstvo one-class school for boys and a women's church school were opened in the village with funds and with the support of the owners of the estate.

Thus, it seems that the emphasized piety of the owners of the estate, the subconscious desire to "silence" the source of their wealth in blood, "redeemed" through painful piety and charity was primarily due to the attraction of the ancestral curse. That is why the construction of two churches on the estate – St. Peter and Paul church in the pseudo-Russian style with the Empire style bell tower and St. Barbara's church in the Empire style – was not accidental, so the descendants tried to apologize and atone for the sin of betrayal.

As can be seen from archival photographs of the early twentieth century, the descendants took special care of arranging the area around the church, in front of the church were magnificent flower beds and exotic plants, including Japanese bananas and fan-shaped palms.

Both St. Peter and Paul Church and its bell tower accentuated the alleys. The side entrance to the estate was through an arch, from which a distant view of the latter bell tower was revealed.

Archival photographs have preserved the memory of what the estate was like before 1917. A photo of an observation deck with a bench, a fence with classic balusters and a decorative vase has been preserved.

The unusual "core" of the "memorial part", which we have already mentioned, was a typical Ukrainian house under a thatched roof, surrounded on all sides by tall trees. This part of the park had a characteristic Ukrainian look and was planted only with local tree species. In the literature, this house is called "the house of Hnat Galagan", although it is strange that the recipient of tsar's favours and a wealthy landowner who received from the Tsar and bought much of the land, lived in such a modest house, still very far from the road. Perhaps, given Hnat Galagan's constant fear of retaliation for his crimes, he deliberately lived in solitude. Moreover, the approaches to the estate from

the side of the road were well visible, and from the opposite side of the house was protected from uninvited guests by the river Utkā.

We have already mentioned that the "Gothic gazebo" and the "Gothic bridge" were located near the Galagan's house.

At the same time, it was actually a small closed pavilion, reminiscent of a family crypt in a Catholic cemetery – with a central lancet-shaped entrance, lancet windows and several slender towers (Fig. 10). The resemblance to the medieval Catholic cathedral is given by the central lancet-shaped window above the entrance, under which there is a strip of Gothic ornament.

The specificity of the fate of the Sokyryntsi estate is that along with the shameful betrayal of the estate founder, the symbol of which was, in fact, the house of Hnat Galagan, in the history of the estate there are pages related to famous Ukrainian cultural figures. An old sycamore tree has been preserved on the shore of the pond, under which the Ukrainian poet Taras Shevchenko wrote his poem of 1860, where the main landscape elements of Sokyryntsi Park can be easily recognized in descriptions of nature. The poem is divided into three landscape paintings: in the first – a description of the beautiful landscape by the river, in the second – the quiet life of a bird family of ducks (by the way, the name of the river Utkā means "Duck"), in the third – idyllic description of the landscape with ducks ends quite unexpectedly: peasants, father and mother, discuss for whom to marry a daughter. This adds an almost imperceptible disturbing note to the atmosphere of the described "quiet paradise". As a genius poet, Shevchenko subconsciously embodied in his poem the "hidden dark side" of the Galagan family, because he obviously knew about it. This ending of the poem can be interpreted in two ways, especially since not everyone dared to become related to the "cursed family", and none of the descendants of Hnat Galagan, according to legend, was not happy in marriage.

The Sokyryntsi ensemble is the most characteristic example of the estate palace architecture of the Left Bank of Ukraine of the 19th–early 20th century, one of the largest and most luxurious of its time.

Unfortunately, today this original ensemble is in poor condition. The surviving pavilions need to be restored. Exotic plants, which were the decoration of the park until 1917, have not been preserved either. This makes the issue of complex regeneration of the Sokyryntsi ensemble and its transformation into a famous tourist attraction.

## Conclusion

Analysis of the layout and applied landscape techniques of Sokyryntsi Park proves the uniqueness of this ensemble and its difference from other parks of this period located in Ukraine – Oleksandriia Park and Sofiiivka Park [14]. Oleksandriia Park was planned in 1793–1840, Sofiiivka Park in 1796–1900 [14]. Sokyryntsi Park was planned under the guidance of

various architects and gardeners over four stages, during the 1823–1900s, which led to the presence of various landscape techniques – Empire style, Romanticism and even elements of "Ossian parks" with motifs of "romanticized Middle Ages".

Thus, Sokyryntsi Park is the latest of these three parks, and specific in its layout, where there is a hidden "memorial" part and directly within the estate repeatedly expressed theme of death, ephemerality and repentance through emphasized piety, when the estate is two large churches, a bell tower and a number of family burials.

The uniqueness of Sokyryntsi Park is that in the planning and construction of the estate from the Empire to the early twentieth century, subconsciously, as in a curved mirror, reflected the history of the family with the "parade side" on display and the "shameful part" hidden from view from the rear of the park. The Galagan's house has not survived, and it is still unknown who destroyed it – the peasants who hated the traitor or the owners themselves when they fled the estate from Bolshevik troops and, according to legend, drowned family silverware in ponds.

As most of the archival photographs have been preserved, including those donated to the museum by descendants of the genus living in Europe, the following measures may be taken:

the first stage – the restoration of those buildings and structures that are fully or partially preserved: first of all the palace and sculptures in front of it, "Gothic Bridge", "Rotunda" with a bridge to it, "Greenhouse" and preservation and care of unique trees – ancient plane tree, Shevchenko's sycamore tree, under which he wrote his famous poem, trees that correspond to the idea of landscaping the park as of 1917, as well as the removal of inappropriate and self-seeding trees and shrubs. At the same stage it is necessary to rehabilitate trees and repair paths, organize flower beds in the same places and in the same form as they are depicted in the photos;

the second stage – to adjust the landscaping around the palace, pavilions, alleys in accordance with historical descriptions and archival photographs, with the planting of appropriate species of trees and shrubs;

the third stage – arrangement of the picturesque "Holy Valley" and restoration of the well, the bridge between the floodplain and the pond with paving of footpaths in the valley with the organization of recreation areas and installation of benches along the main tourist routes on the estate;

the fourth stage – reproduction according to the photo and samples of houses from museums of folk architecture and life in Pirohiv and in Pereiaslav the house of Hnat Galagan with an exposition in the rooms of reproduced furniture of Cossack officers of that time. At this stage, the "Gothic Pavilion" is being restored and a bridge to the opposite bank of the pond is being built, on the site of a former ferry crossing.

Some of the lost objects should not be restored due to the modern function of the estate as a specialized educational institution – first of all,

the Peter and Paul Church with a bell tower, the Barbarian Church and family crypts. Therefore, it is necessary to arrange their former location with the arrangement of symbolic areas with flower beds according to archival photographs and establishing in the appropriate places visual information with photos of buildings and structures that stood on this site, and a description of their history and architecture. It is also possible to install symbolic memorial pavilions on the sites of churches, and memorial signs on the sites of crypts.

Of course, it is quite difficult to combine the use of the palace and park ensemble both as an educational

institution and as a tourist attraction. However, there are already examples of such attempts in Ukraine, in particular in Yurii Fedkovych Chernivtsi National University, which is located in the former Residence of Bukovinian and Dalmatian Metropolitans [7].

This experience will be useful in the complex regeneration of the Sokyryntsi ensemble.

The study determined that the most significant and unique value of the park is its special zoning, so it should be used as one of the main recognition elements and accents in the further development of the park and its inclusion in the recreation and tourism infrastructure.

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**Kopsavilkums.** Rakstā aprakstīta Galaganu dzimtas aristokrātiskās lauku rezidences "Sokyryntsi" parka vēsture un plānošanas principi. Pētījumā salīdzinot, ar tādiem parkiem kā Oleksandriia un Sofiiivka, Sokyryntsi parks ir daudz mazāk pazīstams, lai gan tas ir unikāla starpposma saikne starp "oficiālajiem" klasicisma stila parkiem, piemēram, Oleksandriia Bila Cerkvā un "privātajiem" parkiem.

Ansamblis Sokyryntsi ir unikāls paraugs ar savu iedalījumu vairākās zonās – parāde, memoriāls, slēgts no svešiniekiem, atpūta ūdenskrātuvju krastos. Turklāt šis ir rets piemērs atrašanās vietai tieši divu baznīcu īpašumā, ģimenes kapenes un muižas dibinātāja māja. Ansamblis Sokyryntsi ir unikāls piemērs tam, kā parka plānošanā un attīstībā zemapziņā tika iemiesota ģimenes "dubultā dzīve", kur "parādes" daļa liecināja par saimnieku izglītību un lomu Krievijas impērijā un slēptā "memoriālā" daļa darbojās kā "klusuma figūra" par muižas dibinātāja apkaunojošajiem darbiem.



# Landscaping of Montenegrin resorts: Adriatic coast and the Bay of Kotor

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**Abstract.** The article analyzes the features of landscape design of two different subzones of Montenegro – the northern part of the Adriatic coast and the Bay of Kotor. The aim of the article is to identify the main natural and urban planning factors that determine the nature of greening in the resort towns of the North Coastal region of Montenegro, characteristic techniques of greening and basic approaches to landscape design of the territory of recreational facilities. The methods of geospatial analysis, historical analysis and comparative analysis were used. As a result of the study, the determining role of relief in the predominance of certain methods of greening of resort towns was proven. Comparison of greening techniques of the resort towns of Herceg Novi and Budva showed greater compliance with the local flora of greening in Herceg Novi and greater exotic landscaping of the tourist area of the Adriatic coast – so called Budva Riviera. Seven characteristic methods of landscape design in the resort towns of the North Coastal region of Montenegro have been identified. Two main approaches to the landscape design of the territory of recreational facilities have been identified: "closed", when a closed environment of a recreational facility is created according to the "city within a city" principle with extensive use of stylization techniques and exotic plants, and "open", when views on the attractive natural landscapes or on historical buildings, and landscaping mainly uses local plant species.

**Keywords:** landscape design, resort regions, Montenegro, Adriatic coast, Bay of Kotor

## Introduction

Montenegro is a country in South-Eastern Europe that was once a part of Yugoslavia, fully independent since June 2006, when the confederation of republics of Serbia and Montenegro (proclaimed after the breakup of Yugoslavia) finally dissolved.

The economy of Montenegro is mostly service-based, where tourism plays an important role [13].

The territory of Montenegro is conventionally divided into Coastal Region (Primorska Crna Gora), Central Region (Submediteranska Crna Gora) and Inland Region (Planinsko-Kotlinska Crna Gora) (Fig. 1). Most of the country is the Dinaric Alps, along the border with Albania and Kosovo are the Northern Albanian Alps, in the southeast – the Montenegrin karst plateau with the Zeta Valley [14].

Different parts of the country have different climatic conditions: in central and northern Montenegro the climate is moderately continental (the nature of which is determined by altitude zonation) with moderately warm summers and relatively cold winters, on the Adriatic coast – the Mediterranean with long hot and fairly dry summers and short, mild and rainy winters.

Climatic and geographical diversity of the country determines the spread of various plants and trees in different regions (about 2833 species of plants, of which 212 grow within the Balkan Peninsula, 22 – only in Montenegro).

During the historical development, the vegetation of Montenegro has changed dramatically, as a result of the felling of oaks and cypresses that grew on the coast

since ancient times, due to soil erosion, they were replaced by Mediterranean shrub vegetation, the so-called "maquis".

The Coastal Region of Montenegro is the main resort area, which accounts for more than 90 % of all tourists. It is conventionally divided into North Coast and South Coast regions. The first includes Bay of Kotor (about 28 kilometres long with a shoreline extending 107.3 kilometres) with main centres in Herceg Novi, Tivat, Kotor, Risan, Perast towns and so called Budva Riviera – 35 km long strip of the Adriatic coast with main centre in the town of Budva and smaller settlements – Bečići, Pržno, Sveti Stefan, Petrovac na Moru. The centre of the South Coast Region is the town of Ulcinj with the country's longest 13 km-long beach Velika Plaža stretched from Port Milena in Ulcinj to the Bojana River, among other settlements in the region are Bar – the only deep water port in the country, and Sutomore.

The South Coastal region is significantly inferior to the North one in terms of the number of historical monuments and is relatively new from the point of view of tourism development; therefore it is not considered in the article.

The North Coastal Region attracts tourists not only with its beautiful beaches, but also with many architectural monuments. The area surrounding the Bay of Kotor (also known as the Boka region), as well as the historically connected town of Budva, until 1918 were successively ruled by the Byzantine Empire,



Fig. 1. Municipalities and Statistical Regions of Montenegro [from author's private archive]



Fig. 2. Physical map of the North Coast Region of Montenegro. The towns of Herceg Novi, Tivat and Budva are shown [from author's private archive]

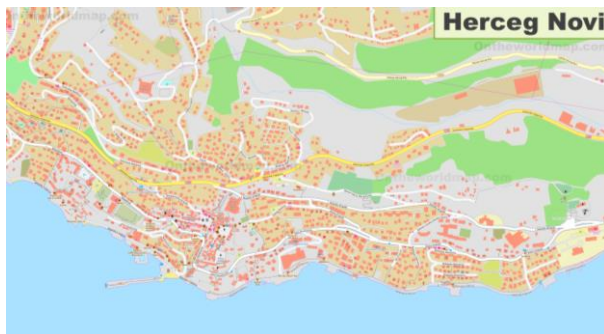


Fig. 3. Map of Herceg Novi. [https://ontheworldmap.com/montenegro/city/herceg-novi/large-detailed-map-of-herceg-novi.jpg]

the Venetian Republic and the Austrian (Austro-Hungarian) Empire [12]. Various cultural influences are reflected not only in architecture but also in landscape design.

A characteristic feature of the seaside resort towns of Montenegro is the use of subtropical plants imported from other countries (the most recognizable of which is the *Phoenix canariensis* palm tree), however, the extent of their distribution and landscaping techniques differ significantly in different seaside resort towns, despite practically the same climatic conditions.

The aim of the article is to identify the main natural and urban planning factors that determine the nature of greening in the resort towns of the North Coastal region of Montenegro, characteristic techniques of greening and basic approaches to landscape design of the territory of recreational facilities. The objectives of the study are as follows:

- to investigate the influence of terrain on the formation of landscape design of various resort towns of the North Coastal region of Montenegro;
- to analyze the landscape design of resorts from the point of view of the historical environment of the town and the influence of landscape design on the perception of architecture in the natural environment;
- to determine specific methods of landscaping;
- to analyze the main trends of landscape design of the territory of recreational facilities (hotel complexes).

To reveal the research topic, sources were elaborated in the following areas:

- the article by Al Basha N., Eplényi A., Sándor G. [1] were elaborated to substantiate the theme of natural stone inherent in Montenegro as a background for landscapes and elements of landscape design;
- to identify specific factors affecting the landscape design of resorts (mainly European) articles by Balode L. [2], Jiang S. [6], Nitavska N., Skujāne D. [9], Ziemehlniece A., Balode L. [15] were developed;
- to consider the impact of landscaping on the image of architecture, the article of Ivashko Y., Kuzmenko T., Li S., Chang P. [5] was studied;
- for a fuller elucidation of the interaction between the space of historical cities and landscaping, works were studied in which the problems of degradation of the cultural landscape and historical environment are covered – articles by Birer E., Adem P. Ç. [2], Pujia L. [10];
- sources from the history, geography and economy of Montenegro were used – the official statistical website of Montenegro [13], the works of Luković N. [7], Roberts E. [12], Šehić Denis, Šehić Demir, Bertić I. [14];
- modern landscape design projects of hotels and apartments located in seaside resort towns of Montenegro [4], [8], [11] were analyzed.

## Materials and Methods

The solution of the research tasks led to the choice of general scientific research methods.

The method of geospatial analysis was applied to study the natural relief of various Montenegrin resort towns and analyze its impact on the nature of landscaping. The method of historical analysis made it possible to trace the process of the spread of exotic plants in the landscape design of resort towns in the studied region. The method of comparative analysis allowed us to compare these phenomena over time and identify commonalities and differences in trends.

Author's photo fixation became the evidence base. Town plans and materials of modern landscape design projects of recreational facilities in Montenegro were also used.

## Results and Discussions

Three resort cities were chosen for consideration: Herceg Novi, Tivat (Bay of Kotor region) and Budva (Budva Riviera) (Fig.2). When choosing, the features of the terrain were taken into account. If along almost the entire coast of the Bay of Kotor the mountains come close to the water (as in Herceg Novi), then in the eastern part of the coast of the bay (Tivat), as well as on the Adriatic coast (Budva), there is enough space for the location of cities on a relatively flat area (taking into account their relatively small size). The terrain directly affects the functional and planning structure of towns, and therefore should also affect the organization of urban green spaces.

### The Bay of Kotor and its subdivisions

The Bay of Kotor (Boka Kotorska) is a general name for a bay of complex shape, which in turn is divided into several smaller broad bays, united by narrower channels. Each of these parts of the great bay got its name from the largest town located on its coast.

The widest part of the bay is the Bay of Tivat. On the seaward side is the Bay of Herceg Novi, at the main entrance to the Bay of Kotor. The inner bays are the Bay of Risan to the northwest and the Bay of Kotor (in narrow sense) to the southeast.

The Bay of Kotor and the Bay of Herceg Novi are one of the most famous resort areas in Montenegro, and these bays are very different – the Bay of Kotor is calmer and quieter, the Bay of Herceg Novi is larger, with open spaces and picturesque prospects.

The picturesqueness of the Bay of Kotor is due to the contrast of high black mountains and a narrow strip of water with the coastline, where along the bay are scattered picturesque small settlements. The local tradition is to place churches, chapels and monasteries on the mountains and islands: on the island of St. George there is a monastery, on the man-made island of the Virgin on the Reef – a church).

The picturesqueness of Herceg-Novu Bay is due to the natural combination of water and symmetrically located on both sides of the green steep mountains that descend steeply to the water, so the coastline is very

narrow, and it is here, near the water, the buildings are concentrated.

The town of Herceg Novi is located on a steep terrain, which accordingly determined the nature of urban housing and public development, and landscaping, which are terraced on several levels (Fig. 3).

The main street of Herceg Novi – Njegoševa Street – is also narrow, framed by magnolias and conifers growing on the slope. There are very few relatively flat areas in the coastal part, so the city park adjacent to the main street is organized by terracing and separated by retaining walls both from the main street and from the coastal part, and the main administrative square of the city is generally a complex two-level structure.

The greening of Herceg Novi combines landscaped and natural areas. There are small well-thought-out landscape compositions near temples and public areas, but the dense greenery along the fences and steep serpentine descents is untidy.

Classic sandy beaches, typical of the Adriatic coast, in Herceg Novi, as in other settlements around the Bay of Kotor, are relatively rare. The bottom is rocky, and there are a lot of large stones at the bottom near the shore, which makes swimming uncomfortable and not very safe. Therefore, in Herceg Novi there are a lot of artificial concrete beaches, ending with a vertical retaining wall, equipped with several ladders for descent into the water, like in a pool.

On the terrace, raised above sea level at 3 – 6 m along the coast, the main pedestrian promenade Šetalšte Pet Danica (Pet Danica Walkway) was laid. Above it a steep rocky slope rises overgrown with grass and agaves.

In one place the rock ledge goes so far into the sea that part of the walking route is laid in a tunnel. On the south-eastern side of the tunnel, on a rock facing the sea, a bronze sculpture is installed (Fig. 4).

The prevalence of agave for landscaping Herceg Novi is due to the local climate. Agave compositions are used as a natural frame for monuments, which are also worth mentioning.

On the example of Herceg Novi, it is possible to single out characteristic techniques of landscape design, which also take place in other Montenegrin resorts. A specific method of memorial landscaping in Montenegro is the surrounding of monuments dedicated to the historical figures (small, devoid of pomp, and commensurate with human stature) with plant compositions, where exotic plants often play the role of accents (Fig. 5).

Another such specific technique in conditions of complex terrain and fairly dense buildings (at least on relatively horizontal areas) is the use of landscaping as a kind of "green frame" or background for numerous architectural monuments.

A typical example of greenery as a "frame" for an architectural ensemble is the Orthodox church of St. Savior and the nearby Catholic church of St. George, perceived from the main street of the town (Fig. 6).





Fig. 4. Sculpture on a rock to the left of the entrance to the pedestrian tunnel on the coast of Herceg Novi [photo by A. Dmytrenko, 2021]



Fig. 5. Monument to the famous Serbian artist Petar Lubarda, who in 1946–1950 was a professor at an art school in Herceg Novi [photo by A. Dmytrenko, 2021]



Fig.6. Orthodox church of St. Savior (right) and Catholic church of St. George (left), view from the main street of Herceg Novi – Njegoševa Street [photo by A. Dmytrenko, 2021]

Types of plants and trees were chosen that would not cover the buildings of natural stone and at the same time emphasize their slenderness.

In front of the ensemble fence there are low groups of agaves, to the right of the Orthodox church and behind the Catholic church – very tall cypress trees, which visually contrast with the bell towers (in the form of a wall with slots where bells are hung), crowning the western facades of both church buildings. Interestingly, the town mosque is also located nearby, but in the depths of the quarter. Such peaceful coexistence of different religions and cultures is typical for the Bay of Kotor region, there is even a special name for local self-identification – Bokelj people [7].

In front of churches, as a rule, there is an open undeveloped space, limited either by a church fence or by low fan-shaped palm trees in flower beds. Sometimes one or two large trees grow near the church.

In the heart of the Old Town, next to the Church of St. Jeronim on the terraces overlooking the Bay of Herceg-Novi, there is a small memorial park, where grass and plants grow among the gray stone masonry. Oleanders and ivy complement the open exposition of a kind of anchor museum. There is also a Monument to the Heroes of Naval Battles on the Adriatic. The use of natural rocks or stone masonry as a background for landscaping is a fairly common technique of landscape design in conditions of dense construction and terrain differences.

Taking into account the resort specialization of the town, it is not surprising that green areas of limited use – areas of hotel complexes – very often exceed in size green areas of public use, such as a town park.

However, it should be taken into account that in Herceg Novi and the adjacent resort towns (Topla, Igalo, etc.), the most significant and prestigious hotel complexes are located near the coast.

Therefore the main attraction for tourists is not so much the landscape design of the hotel area, which would create an impression of a comfortable and moderately exotic environment isolated from the town, as much as the view from the room window of the Herceg-Novi Bay and the historical buildings.

This technique of "borrowed landscape scenery", known even in ancient China, is quite widespread in the landscape design of both existing and planned hotel complexes [8], [11].

A hotel complex, located on a slope, usually consists of several separate buildings, and its territory consists of terraces located at different levels, separated by retaining walls. Large horizontal planes (for example, sports grounds) are often arranged on the roof of underground parking lots. A typical example of such a hotel in Herceg Novi is Hunguest hotel Sun Resort (Fig. 7).

The hotel buildings do not significantly differ in shape or size from the surrounding buildings, and the internal pedestrian connections not only continue the direction of the adjacent streets, but are even from





Fig. 7. Schematic plan of the territory of the Hunguest Sun Resort hotel complex in Herceg Novi. [[https://www.hunguesthotels.hu/en/hotel/herceg\\_novi/hunguest\\_hotel\\_sun\\_resort/](https://www.hunguesthotels.hu/en/hotel/herceg_novi/hunguest_hotel_sun_resort/)]



Fig. 8. Landscaping of the territory of the Hunguest Sun Resort hotel complex in Herceg Novi [photo by A. Dmytrenko, 2021]

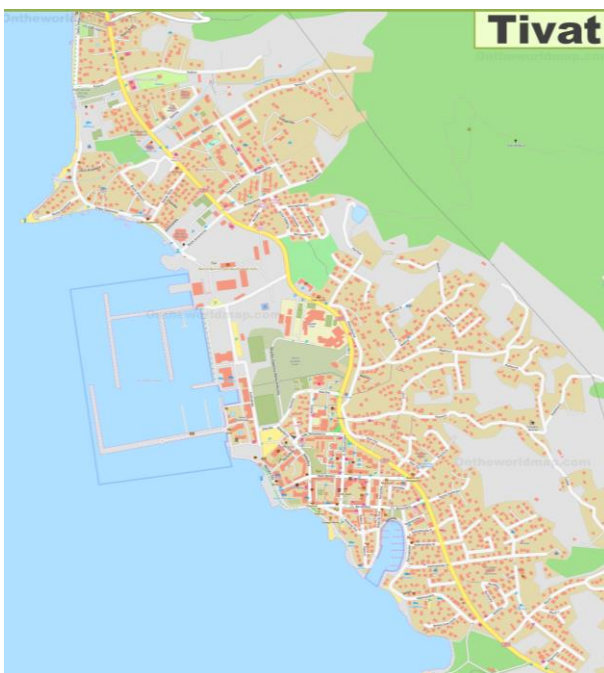


Fig. 9. Map of Tivat [<https://ontheworldmap.com/montenegro/city/tivat/large-detailed-map-of-tivat.html>]

a formal point of view – one of the internal pedestrian alleys of the hotel complex is marked on all maps of the city as a continuation of St. Bubala Street.

The open character of the spatial composition of the hotel complex determines the predominant use of local plants (mainly conifers) as landscaping, and exotic plants are used as separate accents. Magnolias are used among tropical plants.

On the territory of hotel complexes separate buildings are connected by covered galleries for walks in bad weather, around which there are green lawns with compositions of bushes, single agaves and trees (Fig. 8).

In those cases when the hotel complex or sanatorium is located on the town outskirts and it has its own large territory (for example, as Hotel and Health Center Igalo, located in the resort town of Igalo directly adjacent to Herceg Novi from the west), the landscaping of the territory has the character of a forest park with a predominance of local coniferous tree species (based on the therapeutic effect). The use of this specific method of greening the territory is typical for recreational complexes located in the foothills, relatively far from the sea, where there are natural forests, on the basis of which a similar forest park can be created.

Unlike Herceg Novi and most of the towns of the Bay of Kotor, Tivat is located on a more flat area. This was reflected in the planning of the town and the organization of its public green spaces (Fig. 9). Also, the unique history of the town influenced the nature of landscaping.

The Town Park in Tivat near Pržno beach is a unique example of Austro-Hungarian landscape design in Montenegro. This is the largest botanical garden in the South Adriatic, located on an area of 4 hectares. The park was planned on lands originally owned by noble local families – Radali and Lukovič. At the same time it is often called "Fleet Park" or "Naval", "Captain", because it was initiated in 1892 by the commander of the Navy of the Austro-Hungarian Monarchy, Admiral Maximilian Daublesky von Sternek, who wanted to arrange and green the territory of the shipbuilding complex for warships (Tivat arsenal). All seeds and seedlings were brought by military captains of the Austro-Hungarian fleet from the countries where they were. Naturally, the park became the source of the spread of exotic plants both in the towns around the Bay of Kotor and in Budva [7].

Today, the park has the status of a protected natural site, as it coexists with plants from around the world – Chilean fir, various species of larch, eucalyptus, cedar, pine, palm, magnolia, and even two trees of the Australian species *Araucaria bidwillii*, the only ones in Europe.

Gradually, the park has become a tourist attraction and a favorite vacation spot of citizens. Pedestrian paths were laid here, rain canals were arranged, an artificial pond and gazebos were built. Due to its unique flora and historical objects on its territory, in 1963 the park

received the status of a protected cultural and historical object. At the end of the 20th century, it was in a state of disrepair for some time, but gradually began to recover at the expense of powerful European environmental funds.

At the same time, it should be noted that in the landscape design of modern hotel complexes of Tivat located near the coast (Ritz-Carlton Montrose Resort and Residences), the same trends as in Herceg Novi can be traced: the predominant emphasis is on the view of the bay that opens from the hotel rooms ("borrowing landscape pictures"), the predominant use of local plants with exotic plants as separate accents.

At the same time, a partial reproduction of landscaping techniques traditional for this area (for example, for monastery gardens) is used. As noted on the website of the architectural company that developed the complex's project, "The resort welcomes guests through a series of bountiful productivity gardens inspired by the local monasteries and monastic gardens before opening to a terrace offering 270° views of the bay. Stepping down the hillside and moving through the hotel smaller gardens and gathering spaces are discovered along the journey to the Hotels main pool, SPA facilities and Event Lawn gardens with multiple opportunities for outdoor dining at the resorts F&B offerings" [11].

A similar approach is observed in the projects of large suburban hotel complexes located on large plots of land on the coast of the Bay of Kotor, such as Montrose Montenegro [8].

In the landscape design of the new mixed-use quarters of Tivat, such as Boka Place, where there are no panoramic views of the bay, and the main emphasis is on solving the inner quarter space, the basis of landscaping is also local plants [4]. Here, the same method of reproduction of traditional types of landscaping is used, as in the Ritz-Carlton Montrose Resort and Residences, only this object of imitation is not a monastery garden, but a residential courtyard or a small square in the historical part of the Bay of Kotor towns.

### **Synthesis of the Mediterranean and tropical landscape in the landscaping of the Adriatic coast resorts**

The largest resort centre on the Montenegrin North coast is Budva, whose development was formed in a spacious hollow between the mountains and the sea (Fig. 10).

The town of Budva is located in the central part of the Adriatic coast of Montenegro and is the centre of the municipal district with an area of 122 km<sup>2</sup>, with a combination of coastal strip and mountain landscape, which gives it a special exotic beauty, enhanced by landscaping. The town was founded 2,500 years ago and is considered one of the oldest settlements on the shores of the Adriatic Sea.

Budva and its environs are united in the so-called Budva Riviera, one the largest tourist centres in Montenegro. High mountains consist of sedimentary



Fig. 10. Map of Budva.  
[<https://ontheworldmap.com/montenegro/city/budva/large-detailed-map-of-budva.html>]

rocks and are covered with shrubs (so called *maquis*). The new town of Budva developed along the shores of a small bay, which in the north ends at the cape, which houses old medieval town itself behind the fortress walls.

The exotic landscape of Budva is due to the specifics of the typical Mediterranean climate with warm summers and mild winters. The city is one of the warmest Mediterranean cities with an average temperature of 8° C in January, 23.9° C in July, an average summer temperature of 23.1° C, and a winter temperature of 9.3° C. Relative humidity is 63 % in summer and 80 % in autumn.

In the case of Budva, it is fair to say that the landscape appeal of this resort with lots of exotic greenery is successfully combined with the historic buildings of the old fortress town. According to legend, the city was founded by the ancient Greek hero Cadmus, here are the remains of the first settlements of the 5th century BC, there were ancient Greek and Roman civilizations, in the Middle Ages it was ruled by Doclean kings, Serbian and Zetan feudal lords. From 1420 to 1797 the town was ruled by the Venetians, it was called Budua and belonged to the so-called Venetian Albania. It is to this Venetian period belongs the main building of the old town behind the fortress walls, which protected from constant Turkish attacks. Venetian rule affected the fact that until the 19th century the inhabitants spoke the Venetian dialect.

As of the 19th century, the population of Budva was 1,000. In 1815–1918 the so-called Austrian period in the history of Budva lasted, as the city belonged first to the Austrian (1815–1867), and in 1867–1918 – to the





Fig. 11. Palm trees and exotic plants in the central part of the Old Town [photo by O. Ivashko, 2021]



Fig. 12. The scheme of planning the territory of the hotel complex "Slovenska plaža" [material of the advertising hotel booklet, 2021]

Austro-Hungarian Empire. After World War I, Budva became part of the Kingdom of Slovenes, Croats, and Serbs (since 1929 – the Kingdom of Yugoslavia), from the 1930s began to develop as a resort, in 1941 occupied by Italy, the city was liberated in 1944 and from 1970-s years acquires the fame of an international resort. A strong earthquake in 1979 destroyed much of the historic building of the Old Town, but it was all restored [12].

Today the main tourist attraction of Budva is the sea coast with numerous beaches and exotic greenery on the background of the authentic Old Town in the character of Venetian and Mediterranean architecture, where within the fortress walls among the medieval buildings the Cathedral of St. John the Baptist (7th century with later reconstructions), the Church of St. Mary ("In Punta") (840), the Church of St. Sava (1141) with frescoes of the 12th century, the Church of the Holy Trinity (1804) preserved.

It is also worth defining the technique of landscaping, which is used exclusively in the conditions of closed medieval cities with narrow streets. Both in the Old Town of Budva and in the historical district of Herceg New, small squares are landscaped mainly with

local plants, and exotic species, such as palm trees, play the role of accents in landscaping (Fig. 11).

Among beaches, either coarse-grained or pebbly, the following ones should be mentioned: the beaches of Mogren near the Old Town at the foot of high cliffs, the city beach of Pizana near the walls of the Old Town and the Repeno tower, the Slovenska plaža (Slav beach) east of the Old Town, known since 1938, Guvance beach on the way from Budva to Bečići near the rocky cape of the Zavala peninsula, Jaz with the river Drenovstica, bordered by the mountains Grbalj and Straža, Lučice, Trsteno, Ploče.

Near the territory of the Old Town there is a park (one of the two parks in Budva), and its territory continues smoothly with smaller and more scattered green areas and beyond, until the end of the coastal part of the town.

The territory of the town is actually divided into two parts: the coast is adjacent to the actual tourist area with restaurants, berths for yachts, boats and boats, hotels, sports fields and entertainment areas, this area is planted with exotic plants. Mediteranska and Novi Bulevar streets separate the tourist area from the area where the residents live (this area has much less greenery). Even more separation of the residential part from the tourist part is felt behind Jadranska Magistrala street, the terrain is gradually becoming steeper, houses are private, small, and vegetation is changing: exotic palm trees and oleanders of the tourist area replace local olives, pomegranates, laurels, pergolas, wrapped kiwis, fruit trees.

In the tourist area there are many fruit-bearing palms such as *Phoenix canariensis* (family *Arecaceae*), which have become a traditional greenery of the tourist area. Homeland of this palm is the Canary Islands, it is common in the subtropics, now grows from France to Chile, especially popular for landscaping in Spain, Portugal, Argentina, Italy, Croatia, Greece, Turkey, northern Iran, southern and western France, in California and Florida in the United States, Rio Grande do Sul in southern Brazil, Uruguay, Australia, New Zealand and South Africa, it grows on the Black Sea coast of the Caucasus, on the southern coast of Crimea and in the south of Azerbaijan and Turkmenistan. In some countries, palm trees are growing so actively that they have become an aggressive weed tree (in New Zealand).

The palm is a massive tree 10 – 40 metres high, the diameter of its trunk reaches 1 metre with greenish-gray compound short-petiolate leaves 4 – 6 m long with 80 – 100 leaves on the sides of the main rachis, with clusters of orange, oval, with seeds inside. Unbranched straight trunk is quite strong. On its surface there are many stumps, which are the remains of dead and fallen leaves. The leaves are only on the top of the palm tree, and there are from 150 to 200 pieces. The peculiarity of flowering is that the flowers are divided into female (yellow-orange) and male (cream). They are collected in fairly



Fig. 13. Landscape design of the internal green area of the hotel complex "Slovenska plaža" [photo by O. Ivashko, 2021]

large branched axillary inflorescences, while female inflorescences can reach 200 centimetres in length.

The current state of the Budva embankment has been received since 2020, when the reconstruction of the city embankment "Slovenska plaža" began. The first stage included repair works near the post office and Plaza shopping centre, earthworks, construction of a pedestrian bridge over the Svačić stream. Incom from Podgorica was appointed as the contractor. The second stage envisaged landscaping of the territory with 400 varieties of Mediterranean plants and installation of lighting.

In 2020, the Montenegrin authorities announced an international competition to develop an architectural concept for a new look of the Budva embankment from the Old Town to the village of Rafailovići with the arrangement of lawns, planted trees and plants, installation of modern lighting. At the same time, all plans were changed due to the pandemic, even now part of the territory on both sides of the embankment is surrounded by a fence, several high-rise hotel buildings have not been completed.

The largest green area is the territory of the hotel Slovenska Plaža. The large area of the hotel complex is divided into two parts – the entrance service, where tourists come to settle, there is a parking lot and a street of shops with souvenirs, tourist offices, medical centre and parking for guests (Fig.12). An asphalt road and a covered promenade lead to the actual tourist area. Both areas are separated by large green lawns with palm trees. A narrow canal of the mountain river separates the actual zone of villas. The entire Slovenska Plaža includes 10 villas, and the area itself resembles a typical

Greek street. Each villa has its own name and landscaping with appropriate trees and plants – Villa Čempresa, Mirta, Magnolia, Kana, Palma, Kamelija, Limuna, Oleandra, Maslina, Ružmarina.

To create a more Mediterranean impression, the main street is called Korzo, there is a small square in front of the restaurant, where in the evening people gather to listen to national songs live. There are also small shops and beauty salons around the square. Each villa has an outdoor terrace on the courtyard side and its own covered courtyard with a fountain and seating areas.

Villa Čempresa is the entrance gate to the tourist area, so it consists of two volumes connected by arches. This area is planted with cypresses. From here you enter the system of Mediterranean buildings – three-storey villas with white walls and blue shutters, located on both sides of the main street Corso. Pergolas are wrapped in grapes, oleanders and palm trees in tubs, laurels and olives, tropical bushes grow everywhere. Bypassing the area of villas in the direction of the street to the pools, you find yourself in an open space with single palm trees, cypresses, magnolias and bright flower beds (Fig. 13).

The landscape design concept of the hotel complex "Slovenska plaža" provides for the creation of an isolated internal environment, a kind of "city within a city", where interesting but completely artificial sceneries are created due to the extensive use of exotic plants (for example, a combination of grass lawn and palm trees). This landscaping technique is typical for large hotel complexes located on flat terrain, where there is no opportunity to attract tourists with an interesting view from the window of a hotel room or restaurant terrace.

However, famous green parks are not only in Budva. The tourist attraction is an 18-hectare botanical garden with exotic plants from Asia, Africa and America near Sveti Stefan Island and Queen's Beach.

## Conclusion

A comparison of the landscaping principles of two resort areas – the Bay of Kotor (Herceg Novi and Tivat) and the Adriatic coast (Budva) showed their difference: landscaping of Herceg Novi is more suitable for local vegetation, and therefore more modest, dominated by conifers – southern pine, thuja, cypress. At the same time, compositions of agaves, fan-shaped palms, magnolias, and oleanders are planted directly in tourist areas.

Instead, in the case of Budva, we can talk about the emphasized "man-made" landscaping in the main tourist areas, which are the Slovenska Plaža complex, the waterfront and the town park.

The specifics of the climate of different regions of Montenegro led to the spread of certain species of plants and trees. The closer to the Adriatic coast, the more frequent use of landscaping with palm trees, white, yellow and pink oleanders, magnolias and various



species of cacti. Kiwis are common, which cover most of the pergolas of private estates in Budva, grapes, peaches, oranges and tangerines, in the mountains above Budva wild pomegranates grow, in the estates – cultivars.

The main factor influencing the choice of landscaping techniques was the nature of the terrain. In the towns of the Bay of Kotor, where there was a relatively flat area between the mountains and the sea, as in Tivat, landscaping techniques are very similar to towns on the Adriatic coast, such as Budva.

The analysis of the landscape design of Herceg Novi, Tivat and Budva made it possible to determine the characteristic landscaping techniques.

The first technique, the so-called "memorial landscaping", is the surrounding of modest human-scale monuments to prominent persons with plant compositions, where exotic plants often play the role of accents.

The second technique for conditions of complex terrain and fairly dense buildings, especially in historical cities, is the use of landscaping as a kind of "green frame" or background for numerous architectural monuments, using local plants as a background and exotic plants as accents.

The third technique involves terrace gardening, when terraces are arranged on the slope, separated by retaining walls, and the stonework of these walls is used as a background for individual exotic plants or as a support for twisted liana-like plants. In particular, this technique is often used on the territory of hotel complexes located on difficult terrain.

The fourth method can be conventionally called the method of "artificial improvement of the landscape", when due to the extensive use of exotic plants, interesting but completely unnatural species pictures are created (for example, a combination of grass lawn and palm trees). It is used in large hotel complexes and city parks located on relatively flat terrain.

The fifth technique, which is used for greening the territories of hotel complexes both on complex terrain and on the plain, is the technique of the so-called "borrowed landscape" - strengthening the properties of landscaped spaces with views of water spaces and historical buildings.

The sixth technique used for greening hotels of a large area on the outskirts of cities is the transformation of

natural forest areas into a forest park with a predominance of local coniferous tree species (with the expectation of a therapeutic effect).

The seventh technique is the reproduction of landscape design samples characteristic of a certain area in our time (for example, the landscape design of hotel complexes can imitate monastery gardens, and the landscaping of the inner courtyard of a residential complex can reproduce the landscaping techniques characteristic of small areas in the historical part of the coastal towns of the Bay of Kotor).

If in the town as a whole, the system of organizing green spaces is rather rigidly connected with natural and urban planning conditions, then when organizing the landscape design of the territory of large hotel complexes, there is no such rigid conditioning.

In the landscape design of the territory of large hotel complexes, two approaches can be traced in general.

The first involves the creation of a kind of "city within a city", a somewhat theatrical environment, where unusual combinations of exotic and local plants are widely used. As a rule, this approach is used when, due to natural conditions (or the volume-planning solution of the buildings of the complex), it is not possible to provide an interesting view from the windows of the rooms (to the sea, mountains or historical buildings). Such an approach can be conventionally called "closed". It is especially characteristic of large hotel complexes in such Mediterranean countries as Turkey (especially the Antalya region) and Egypt.

The second approach in landscape design can be conventionally called "open". It is more often used when placing a hotel complex on the terrain, in cities with historical buildings and architectural monuments. Here, attractiveness is achieved due to the organization of interesting views from the windows of rooms, terraces of restaurants, etc. The basis of landscaping is local plants (sometimes traditions are consciously followed, for example, of monastery gardens), and exotic plants play only the role of individual accents.

Both approaches are aimed at creating a visually rich and interesting environment that differs significantly from the tourist's everyday surroundings.

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**Kopsavilkums.** Rakstā analizētas divu dažādu Melnkalnes apakšzonu – Adrijas jūras piekrastes ziemeļu daļas un Kotoras līča – ainavu dizaina iezīmes. Raksta mērķis ir apzināt galvenos dabas un pilsētplānošanas faktorus, kas nosaka apzaļumošanas raksturu Melnkalnes ziemeļu piekrastes reģiona kūrortpilsētās, raksturīgos apzaļumošanas paņēmienus un pamata pieejas atpūtas objektu teritorijas ainavu dizainā. Tika izmantotas ģeotelpiskās analīzes, vēsturiskās analīzes un salīdzinošās analīzes metodes, un tika pierādīta reljefa noteicošā loma atsevišķu kūrortpilsētu apzaļumošanas metožu pārsvarā. Hercegnovi un Budvas kūrortpilsētu apzaļumošanas paņēmieni salīdzinājums parādīja lielāku atbilstību Herceg Novi vietējai florai un eksotiskāku ainavu veidošanu. Ir noteiktas septiņas raksturīgas ainavu dizaina metodes Melnkalnes ziemeļu piekrastes reģiona kūrortpilsētās. Atpūtas objektu teritorijas ainavu noformēšanā ir identificētas divas galvenās pieejas: "slēgtā", kad pēc principa "pilsēta pilsētā" tiek veidota slēgta atpūtas objekta vide, plaši izmantojot stilizācijas paņēmienus un eksotiskus augus un "atvērta", kad skatos uz pievilcīgām dabas ainavām vai vēsturiskām ēkām, ainavu veidošanā galvenokārt tiek izmantotas vietējās augu sugas.

# Urban nightscapes and lighting master plans. Case study of Liepāja



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**Abstract.** Development of modern technologies and urbanisation enable cities to provide a broad range of services even at night, which means that the nightscape is becoming more used. The goal of the study is to develop recommendations for planning the night-time outdoor space and its elements in an urban environment, with a view to improve the functional and aesthetic quality of the city, and to reduce light pollution. To achieve this goal, the authors studied theoretical materials, analysed the experience of three cities in developing lighting plans, conducted field research and made photographic records to assess various areas, compiling and creating a visual representation of the results. The city-level focus in solving night-time cityscape problems is on the drafting of lighting master plans. Using such plans, one can spur tourism and economic growth, and improve the quality of life among the locals. On the level of the city, elements such as edges, neighbourhoods, roads, landmarks, viewpoints and nodes play an important role at night. One has to identify these elements and highlight them based on the recommendations developed. The proposed development of a Liepāja city lighting plan would strengthen the city's identity, improve the safety of the night-time use of outdoor spaces, facilitate navigation, and create aesthetically pleasing views. Furthermore, this is an opportunity to reduce light pollution and transition to sustainable solutions through the use of various smart technologies associated with lighting.

**Key words:** nightscape, urban landscape, lighting master plan, artificial lighting, light pollution

## Introduction

Night-time landscape (nightscape), just like day-time landscape, can be considered a part of urban landscape as a whole. The difference between them is in the transition from natural lighting to artificial lighting [23]. Just like people, cities function in day and night modes. Over time, urban environments have developed to have a 24-hour cycle of activity, which also affects local residents. Advances in technology, travel between different time zones, availability of services and entertainment: all of this and more have extended the time of human activity beyond the usual constraints [5; 10]. With the increasing duration of night-time use of urban spaces, and the number of the users, the issue of the aesthetic and functional qualities of these outdoor spaces is becoming ever more relevant. Studies of night-time cityscapes and lighting only became common with the invention of electricity in the

second half of the 19th century [23]. Today, we can observe a lack of balance in the studies that look at daytime and night-time subjects. While day-time cityscapes are well-studied, nightscapes enjoy little attention [5; 10].

With the spread of lighting technology, people have developed positive associations with light, as a representation of the growth and economic well-being of humanity. Various religions and philosophic frameworks view light as standing for everything that is good and proper, for God, while darkness is a manifestation of evil, sin, and the Devil. Light means safety, comfort, and beauty. Darkness means fear, uncertainty, and ugliness. The compulsion to fight darkness is almost a subconscious need among humans, which has been around since the discovery of fire. These factors are often the cause of inefficient use of artificial lighting in outdoor spaces, leading to a new environmental problem: light pollution [1; 18]. According to a "World Atlas of Artificial Night Sky Brightness" created in 2016, some 80% of the Earth's population lives under a light-polluted sky [6]. Figure 1 shows the fields, in which light pollution creates undesirable effects, including the economy, climate, and living organisms (humans, animals, plants).

The behaviour of almost all living organisms depends on the rotation of our planet, and the corresponding night-and-day cycle. Thousands of years ago, our ancestors realised how important the celestial bodies were, and began worshipping them.

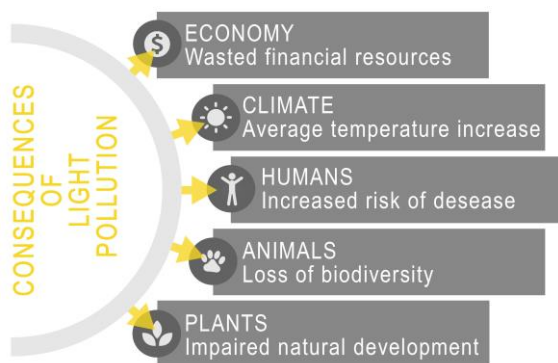


Fig. 1. Consequences of light pollution [8]

To this day, the ancient role of these celestial bodies echoes in the lives of humans, for example the seven days of the week representing the seven brightest objects in the sky (the sun, the moon, and the five planets visible with an untrained eye). The starry sky has served as an inspiration and foundation for mythology, religion, navigation, and scientific discoveries. In its own way, the night sky is a museum of nature and culture, where one can see planets and constellations, enjoyed before by countless generations. Even though the symbols may differ, the sky is a uniting element for various cultures and people [4; 19; 20].

The ability to observe the night sky and see an infinity of stars and galaxies above us: these are the dimensions of space and time that we can only comprehend in an abstract way. This view does not leave anyone indifferent; it inspires and elicits a feeling of awe. The night sky is a requirement for the development of human consciousness. Without the starry sky visible, one cannot realise that humans are a part of the cosmos [18; 20]. Today, we associate sights of the true night sky with being in nature, something only accessible outside the urban environment. Even though this is a good thing for developing reserves with an unpolluted dark sky, it is worth remembering that this way, we unconsciously lay a strict boundary between nature and the urban environment. Returning the night sky to the city can be viewed as a form of urban renewal. It is a process, as part of which one can synchronise the city's appearance with the night-and-day cycle and bring nature back to the city [20].

The recommendations for preserving biodiversity, reducing negative effects on human health, and preventing rapid climate change can be divided into three categories:

**Elements of lighting.** Elements with direct diffusion of light are recommended. Elements that insects cannot get into must be preferred. Lighting must only be used where it is really necessary, and one must confirm that the emitted light achieves its intended goal. The possibility of light reflecting from various surfaces (roads, walls, windows) must be reduced.

**Planning of lighting.** It is recommended to develop guidelines for the maximum permitted level of brightness, in order to set areas where lighting is a priority at night, as well as areas where preserving views of the starry sky is important. Development of lighting master plans in urban planning and establishing partnerships with the private sector are recommended. Smart lighting systems must be used wherever possible.

**Society.** It is necessary to inform the public of the problem of light pollution and remind it of the significance of the starry sky at night, for example, by setting up night sky observation parks and promoting astronomy [1; 18; 19].

A lighting master plan is a basis for the strategy and development of urban lighting. It is a comprehensive, high-level planning document that consists of a review of the current situation, as well as creative and technical sections. It could also be referred to as a darkness plan. The plan takes into account the geographic, environmental, historical, cultural, and social contexts, as well as the needs of people. The creative section of the plan is there to cover the visual part, offering lighting solutions that would be a good fit with the cityscape. The technical section sets the lighting standards and criteria, as well as recommendations and guidelines for technical solutions. Plans do not always encompass the entirety of the city, instead sometimes focusing on the most important areas [2; 16].

Professionals in three fields are responsible for developing outdoor lighting scenarios: urban lighting designers, architectural lighting designers, and urban lighting planners. However, specialists in other fields participate in the development of the lighting master plan, to achieve a better result, and one of these is the landscape architect [2]. Given the current situation in Latvia where the profession of lighting designers and planners is not particularly well-developed, it is the architect or landscape architect working in conjunction with the engineer designing the electric lines who usually plans the layout of outdoor lights [3].

A good lighting plan is adapted to the individual nature of the environment, creating harmony in the nightscape and providing a link with the dayscape. The architecture and urban planning of the location should function as the foundation of the lighting concept [15]. The approaches and interpretations in the development of the plans are different, but in most cases, the goal is the same: to revitalise the areas and create accents in the urban environment through the use of artificial lighting [16].

The goal of this study was to develop recommendations for planning the night-time outdoor space and its elements in Liepāja, with a view to improve the functional and aesthetic quality of the city, and to reduce the light pollution in it.

### Methodology

The theoretical part of this study contains information about the lighting master plans adopted in European cities. The experience of three cities—Jyväskylä, Ghent, and Strasbourg—in developing lighting plans was analysed.

The empirical part includes a review of the current situation with the night-time cityscape in Liepāja. The city-level study was based on determining the elements forming the image of a city defined by Lynch [17]. First, the objects marking the city edges were identified, as they matter not only in setting the boundaries of the city as a whole, but also in defining its individual neighbourhoods. Second, the neighbourhoods to be considered, and their special features, were defined. Third, key access routes for



the city, transport-related access points, and links between neighbourhoods were determined. Fourth, the points of night-time activity were identified. Finally,

a summary was prepared of the principal landmarks and viewpoints that help with navigating the outdoors. In addition to the identification of the elements, the authors offer recommendations for developing them in the context of the night-time cityscape. A Liepāja lighting master plan proposal was submitted.

## Results and Discussion

### *Case study analyses*

**Jyväskylä, Finland.** Jyväskylä is the seventh largest city in Finland with 142 thousand residents. The first lighting master plan there was developed in 2000, based on an in-depth study of the city. Currently, the city has more than 100 objects with individual lighting [15; 22].

The lighting solutions are largely focussed on the city centre, encouraging people to go there, although attention is also paid to central parts of neighbourhoods. Lit viaducts and bridges stand out against the background of the city, and at night, they function as gates and landmarks for it. Lit high-rise buildings also offer much help navigating the city, and so do the city theatre, church and council buildings provided with more discreet lighting. Attention is paid to the green zone arranged in a circle around the centre of Jyväskylä, consisting of parks and nature areas. The city's residents use the green belt for outdoor activities at night. The "City of Light" urban lighting development project is ongoing in the city, involving various events with light installations [15].

The city works on communicating with private owners of buildings in requiring them to obtain approvals for changes in the lighting of the buildings, so that the overall appearance of the city at night is uniform and achieves the goals of the lighting master plan. Information materials have been made, and a new lighting plan is currently in the works: visually simpler, it should be clear to anyone interested in the topic. A study of the public's attitude towards the lighting solutions conducted by the local government in 2009 resulted in 90 % positive reactions, supporting the lighting plan, while 83 % of the respondents pointed out that the lighting improved the visual image of Jyväskylä, presenting it as a modern city [15; 22].

**Ghent, Belgium.** Ghent is known as a city of knowledge and culture. Its population reaches 260 thousand. Ghent's first lighting plan was developed in late 1990, with a focus on the city centre. The second lighting plan came in 2006, with attention aimed at neighbourhoods and emphasising their identities. It was found that neighbourhoods did not need new night-time landmarks, because those already existed, just on a smaller scale, and the only

task remaining was to provide them with proper lighting [15].

Ghent's artificial lighting elements can be divided into three categories: functional street lighting, mood lighting for building facades and pedestrian streets, and monument lighting. Only the functional lighting works continuously, while decorative lights stay on between twilight and midnight, not including certain monuments that emphasise the city's identity. These categories interact with one another, creating a single, balanced image of the night-time cityscape. Mood lighting acts as a link between functional and monument lighting [15].

The development of lighting master plans has brought additional benefits to the city. Stronger identity, incentives for night-time business activities and tourism, as well as better safety. However, rapid advances in new technologies, which can be used by private businesses, are noted as a threat to the night-time cityscape. The lighting plan and the overall uniform image of the city that takes years of work can easily unravel. One must strike a balance between the big (overall lighting plan) and the small (local businesses) [15; 21].

**Strasbourg, France.** Strasbourg is a city in northern France, with a population of 281 thousand. The first lighting master plan there saw development in 1990. Strasbourg's nightscape creates a sense of belonging among its citizens and attracts tourists. The main focus is aimed at architecture and creating transition areas, as well as nodes. The strategy rests on six principles: environmentally friendly lighting in terms of energy consumption and light intensity; emphasising the historic heritage of the city; highlighting its modern identity and being a part of Europe; bringing out different neighbourhoods, with particular attention paid to special outdoor areas; creating connections between neighbourhoods to foster mobility and unity; protecting natural areas, by reducing light pollution [15].

Warm white lighting, combined with more traditional elements, is used in the central part of the city. Attention is paid to historic flavour, with restrictions in place limiting advertising signs with lighting in the centre of Strasbourg. More modern amenities can be found in the European district, which houses the European Council and Parliament. Everyday and seasonal lighting sees use during various celebrations. Connections between neighbourhoods are a particular focus of the city's lighting master plan. Interactive, original, and integrated lighting solutions have been created, improving the sense of security among locals, and creating points of attraction [15].

The examples of good practice reviewed make it possible to identify four common items used in the development of night-time cityscapes, see Figure 2. First, it is the lighting of the objects significant and



Fig. 2. Main elements of city nightscape planning  
[created by the author, 2021]

recognisable in the city. Emphasising such objects at night makes it easier to navigate through the city and strengthens its perceived identity. Second, it is the creating of safe mobility connections between neighbourhoods, and the emphasising of neighbourhood centres and nodes, in order to cultivate a sense of belonging among the city's residents. Third, it is the use of custom lighting elements in historic locations, and locations with a special and different atmosphere. Fourth, it is communication with the private sector and the public. All parties involved in the life of the outdoor spaces in the city must participate in creating its common night-time cityscape image.

#### Liepāja case study

Liepāja, referred to as the city of winds, is Latvia's third largest city, with almost 68 thousand residents in 2021. The total area of the city is 68.0 square kilometres, of which 16.7 are covered by bodies of water. Across the year, daytime takes up ~51.4 % of the 24 hours, twilight ~22.6 %, and night-time ~26.0%. Given that artificial lighting normally turns on during twilight, one can essentially view the ratio between daytime and night-time cityscapes across a 24-hour period as 1:1.

Between 2011 and 2014, the local government in Liepāja conducted a major lighting project, 'Modernisation and reconstruction of the street lighting system in Liepāja'. As part of the project, lighting was improved in 366 streets in Liepāja, with a total length of 168 kilometres. 4738 new lights were installed, 5.5 kilometres of streets were reconstructed, 2.4 kilometres of bicycle paths were built, and 140 trees were planted. The new lighting system provides data about individual lights and makes it possible to adjust their intensity. 'Round 2 of Liepāja lighting system modernisation' took place in 2014 and 2015. In 2020, the total number of lights in the city was 7600, of which 800 were still old. LED technologies have been used installing new lights in recent years [7; 12; 14].

In regulatory terms, the requirements set for the lighting are minimal. In the Liepāja municipal plan developed in 2012, lighting is mentioned in only two items of the Land Use and Development Regulations (TIAN) [13]. In 2015, as part of the 'Development of Liepāja beach and coastline' thematic planning, a lighting concept was prepared for the north and

south beach zones. Lighting serves as a connection between the beach exits and the city streets. The use of both functional and decorative lighting was proposed, depending on the features of the surrounding landscape [11]. Another notable special occurrence associated with lighting is the 'Izgaismotā Liepāja' ('Lit Liepāja') event that took place in 2020. A city-wide recreational walking route with more than 20 light objects was an appropriate solution in a time when pandemic restrictions defined how people were allowed to use outdoor spaces. The event received an excellence award by Latvijas Pasākumu Forums. It attracted considerable interest, and plans are in place to hold another 'Izgaismotā Liepāja'.

In recent years, the interest in night-time urban spaces and lighting solutions has been notably rising in the city. There is awareness of the economic benefit of using smart technologies, as well as the cultural aspect of night-time activities and their potential to promote tourism. The pertinent regulatory requirements are general in nature. According to these, lighting must be adapted to the existing urban space. However, no specific types of urban spaces are defined, offering no guidelines for lighting them (this does not include the beaches and the coastline, for which a lighting concept has been developed).

The following elements defining the image of Liepāja were determined as part of the research:

**Edges.** Water elements expressed in a linear fashion are used to set the boundaries of Liepāja. To the West, it is the Baltic Sea, and to the East, Lake Liepājas. In the North, the boundary is formed by the Tosmare nature reserve, and Lake Tosmares within it, while in the South, by Pērkones Canal. Three additional edge-forming elements can be found within the city, namely Tirdzniecības Canal, Karostas Canal, and the railway line. The internal elements are decisive in the division of neighbourhoods discussed below. In the context of night-time urban spaces, particular attention should be paid to Tirdzniecības Canal and Lake Liepāja, as locations, from which the lit skyline of Liepāja is visible. Even though the linear-shaped water elements form physical barriers between different areas, such open views can create mental connections. An inspection of the Liepāja skyline visible from the northern bank of Tirdzniecības Canal during the day and at night shows that at night, the top of the steeple of the Holy Trinity Cathedral blends in with the sky at night, and so does the 'Lielais dzintars' concert hall. In contrast, the facades of flat blocks are brightly lit. In developing the night-time skyline of the city, one should strive to achieve an opposite effect, emphasising public buildings and their elements, and not residential buildings. Given that the work to improve Kārļa Zāles Square has begun, it is possible to provide lighting to its elements in the future, to move attention away from the residential buildings, see Figure 3.

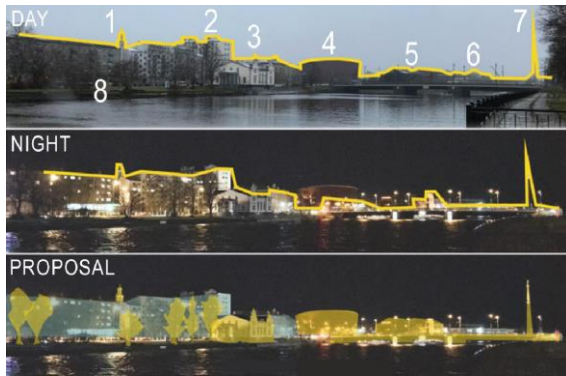


Fig. 3. City skyline view from the northern bank of Tirdzniecības Canal: 1 – Holy Trinity Cathedral; 2 – Flat blocks; 3 – Libava Hotel, 4 – ‘Lielais dzintars’ concert hall, 5 – Promenade Hotel, 6 – Tramvaja Bridge, 7 – Radio and television tower; 8 – Kārļa Zāles Square [8]

Recommendations for developing edge-forming elements in the city in the context of night-time cityscape:

- Create dark zones in the elements forming the outer edge of the city;
- The Tosmare nature reserve, located further away from the city centre, has the biggest potential for watching the starry sky. The reserve currently does not have a properly set up entrance. In developing night-time outdoor spaces, one can possibly create fenced-off zones for stargazing and educating the public about the problems of light pollution. These need safe and visible access routes, with municipal elements like information signs, deck chairs, waste bins;
- Boundaries inside the city must be reduced physically. The ability to cross them safely at night must be provided for cars, pedestrians and cyclists;
- Internal borders must be reduced visually, lighting larger objects on both the sides of the edge elements, ensuring connections between city neighbourhoods, and creating a sense of belonging among residents;
- In locations where one can view the skyline, the view must not be obstructed. The level of foreground lighting should be reduced as much as possible, to improve the visual quality. The skyline should be enhanced by lighting larger landmarks and other buildings forming it.

**Neighbourhoods.** One can distinguish nine different neighbourhoods in Liepāja: Karosta, Tosmare, Zaļā Birze, Ziemeļu Priekšpilsēta, Jaunā Pasaule, Jaunliepāja, Vecliepāja, Dienvidrietumu Rajons, and Ezerkrasts [13].

Karosta is notable as a neighbourhood with one of the strongest identities in Liepāja. The neighbourhood used to be a closed military base, strictly separated from the rest of the city. Karostas Canal still functions as a clear boundary between this neighbourhood and the rest of Liepāja. Aside from the city centre (Vecliepāja), Karosta is the neighbourhood that attracts the highest number of tourists. Although it does not offer any night-time points of activity, its sights encourage people to visit

the neighbourhood at night. In terms of the night-time cityscape, the lighting of various buildings, such as the Naval Cathedral Church of Saint Nicholas, and the Karosta Prison, can be assessed as good. A well-lit and attractive connection between this neighbourhood and the nearby Ziemeļu Priekšpilsēta is provided by the Oskara Kalpaka Bridge, which is a rotary bridge with a wooden plank deck. At the same time, other landmarks that are just as important (e.g. Ziemeļu Fortifications, and Karosta Water Tower) remain in the dark.

Providing these objects with lighting could improve navigation within the city, offer the potential for a high-quality night-time route for tourists, and successfully strengthen the identity of the neighbourhood.

Recommendations for developing city neighbourhoods in the context of night-time cityscape:

- Emphasise the unique character of every neighbourhood by lighting the elements that form its identity. At the same time, the city-scale lighting concept must contain unifying elements, to avoid fragmentation;
- Provide lighting to neighbourhood-scale landmarks to improve navigation;
- Create safe connections between neighbourhoods, and in particular, between each neighbourhood and the city centre. There must be connections for cars, pedestrians, and cyclists.

**Access.** The city can be accessed in six different ways. By car, one can access Liepāja using the roads: A9 (Riga (Skulte)–Liepāja), A11 (Liepāja–Lithuanian border (Rucava)), P110 (Liepāja–Tāši), and V1188 (Liepāja–Šķēde–Ziemeļe). The city offers both free and paid parking. The roads also enable coach access, with routes connecting Liepāja to cities in Latvia and Lithuania. The coach terminal and railway station are in the same location. Trains run less frequently than coaches, only twice a week. However, they provide a connection to the capital. The Liepāja International Airport is just outside the city boundary, and currently accommodates regular flights to and from Riga. Because of the city’s advantageous geographic location, access is possible by ferry, using the Liepāja–Travemünde (Lübeck, Germany) route, and the yacht marina in the city centre makes it possible to come to Liepāja by boat [9].

The main streets of the city can be divided into three categories: city streets, neighbourhood streets, and pedestrian streets. In the context of urban spaces, the categories are defined by their users, functions, and scale: city streets used by lorries are larger in scale, for example, while pedestrian streets have a smaller, human scale. The rail tracks include tram line infrastructure, and railway infrastructure. The tram line is largely arranged parallel to roads or integrated with them. Meanwhile, the railway line sets relatively stricter boundaries of the landscape spaces; it splits roads, sometimes running parallel to them, moving further away in other locations.

Railway infrastructure can be grouped in the railways only intended for cargo, and those that can also be used for passenger transport. For more detailed divisions, bicycle paths can be broken down into international EuroVelo routes, city routes, and bicycle paths. The EuroVelo routes cross the city in a vertical direction, while the city routes have a circular shape. The bicycle path system is not well-developed in the city, largely arranged along major roads. There is a lack of safe connections in the central part of the city, and its residential neighbourhoods. The current road situation in terms of night-time urban spaces in Liepāja can be considered good. A visit to Lielā Street, which is one of the city's biggest and most presentable streets, reveals the use of lighting elements of appropriate size. The intensity of the light and its white colour are appropriate for the intense use of the street. In Roņu Street, whose use is less intense, one can find appropriately smaller lighting elements. The design of the lighting elements suits the current mood of the urban space.

Recommendations for developing city streets in the context of night-time cityscape:

- In terms of street lighting, one can identify three light intensity zones: first, city streets with the highest level of light intensity and perceived scale of night-time spaces; second, neighbourhood streets with a medium light intensity, and third, minor local streets with a low light intensity;
- Bicycle paths and pedestrian streets need relatively smaller, human-sized lighting solutions that are comfortable for the users;
- One must improve the network of bicycle paths, creating uninterrupted links between the neighbourhoods and the city centre;
- In terms of tram and railway infrastructure, particular attention must be paid to crossing safety. The crossings must have higher levels of lighting, with better rendering of colours. The same applies to pedestrian crossings of roads;
- Points of access to the city must be provided with lighting, given that these locations function as the first landmark that tourists see when they come to the city;
- In designing the lighting elements, one must take into account the urban space surrounding the section of the road in question. More modern solutions will better suit recent developments, while in historic development areas – older-style elements.

**Nodes.** Businesses and locations that generally see activity at night, after 22:00, were identified in the context of urban nightscape planning. These locations were determined based on the information posted on the website of the Liepāja Region Tourism Information Office, and these are the following: Juliannas Courtyard, Red Sun Buffet Beach Bar, '7. Īmija' beach bar/cafe, Klondaika Recreation Centre, CukurFabrik Lounge & Club, Fontaine Palace Nightclub, BIG7 Nightclub. Although the word 'night' invokes the usual

associations with midnight and early morning hours, one should keep in mind that during longer winter nights, night-time cityscapes also include evenings. This is why in determining points of activity, it is important to identify public venues that operate between 17:00 and 22:00. These include culture and entertainment venues, sports facilities, hotels, and shopping centres. It is also necessary to identify the more intensely used outdoor public spaces, such as parks, squares, and various nature areas intended for recreation.

An analysis of hubs of night-time and evening activity shows that these venues concentrate around three different points of activity in the south section of the city. The most important point of the activity is on both sides of the Tramvaja Bridge, which connects the Vecleipāja and Jaunleipāja neighbourhoods. It is notably linear in shape, and includes all of the venues listed above, offering options for entertainment, shopping, active and passive recreation, and night accommodations. This point of activity enjoys the highest level of artificial lighting intensity. This is a place that sees the most attention in creating various themed light installation during public holidays. The second point of activity is in the coastal area, with more focus on sports, culture and entertainment. Third is a relatively small point of activity in the southwestern section, consisting mostly of shopping centres. Active venues are virtually absent in the north section of the city, beyond the Karostas Canal.

Recommendations for developing city nodes in the context of night-time cityscape:

- Plan the development of the three key points of activity in Liepāja;
- Make arrangements for different options to access the points of activity, including roads and parking, bicycle paths with parking for bicycles, pedestrian routes, and bus stops. Arrange the creation of a multifunctional night-time outdoor space, providing the infrastructure for active and passive recreation, as well as basic functions (various products and services, night accommodations, public amenities, etc.);
- Provide safe connections between the points;
- In selecting lighting elements, pay attention to using a design that matches the visible surrounding areas of the quarters. Avoid chaotic lighting in laying out the elements;
- In terms of choosing the lighting, develop a more detailed lighting strategy, taking into account the fact that the points of activities are the most visited areas at night.

**Landmarks and viewpoints.** If provided with lighting, landmarks can improve navigation at night, direct traffic in the needed direction, and improve the overall visual arrangement and skyline of the city. In Liepāja, major architectural sites play the role of landmarks, including cathedrals and churches, water towers, industrial and port structures, hospital, concert hall, monuments, major shopping centres, and city gate motifs.



On the city level, landmarks should be considered in combination with the most important visual lines. At night, people look at lit objects. For example, during the day there is a clear visual line in the direction off the sea, which blends in with the background and is thus invisible at night. In contrast, a lit steeple will stand out against the dark sky.

Although all of the city-level landmarks identified already have lighting, not all of it is complete. The angles for lighting the cathedrals were found to be wrong. The light is directed from the bottom upwards, and does not reach the tops of the buildings, thus reducing the potential distance from which they can be seen. The most striking viewpoint for looking at the Holy Trinity Cathedral is obstructed by a streetlight. The bank building to the right of the cathedral distracts attention from the visual line with its excessively bright signs. A streetlight also obstructs the view of the Naval Cathedral Church of St Nicholas. The lighting of the cathedral is relatively low intensity, which reduces its visibility at longer distances. Lighting this cathedral from its bottom also means losing the view of its most impressive element, the golden domes.

Recommendations for developing city landmarks in the context of night-time cityscape:

- On the level of the city, provide landmarks with lighting to improve navigation, and to strengthen the identity and night-time skyline of the city. Keep in mind that the landmarks will be visible from different sides. Consider the look within the overall composition of the urban environment. Adjust the intensity of the lighting, its direction and colour, to create a balanced appearance;
- Landmarks that are located at points of activity in the city and are aesthetically more attractive should be lit more brightly. These are the religious facilities, the concert hall, and the monument;
- In lighting objects, take into account the brightness of the lighting, to avoid glare. It is also important to pay attention to the possibility of glare caused by buildings with reflective surfaces;
- Analyse the objects to be provided with lighting, to choose the best colour of the light and its direction, as well as the design of the lighting elements to be used. Proper selection of lighting enables correct presentation of the landmark at night;
- It is recommended to lower brightness connection zones between lit objects, in order to improve the visual composition;
- Create safe traffic links between landmarks. Lower light levels and smaller elements can be used for this;
- Make sure that the views of the lit landmarks are not obstructed. Unobstructed views improve navigation and direct traffic flows.

### Liepāja lighting master plan

The lighting plan concept is based on the idea of creating a uniform and visually appealing night-time image of the city, at the same time emphasising the individual valuable features of every neighbourhood and creating a safe and functional outdoor space, see Figure 4.

Three keywords describe the concept:

- **Dynamics.** First, this means creating different layers of lighting in the urban environment, with a hierarchy of lighting and smart technologies that adjust the levels of lighting to the needs of its users. Second, this means emphasising the characters of different neighbourhoods, by providing lighting to different elements that form their identities. Third, dynamism manifests itself in the scale of the lit elements, starting from city-wide landmarks to the lighting of lower layers and surfaces in urban spaces. Dynamism also symbolically fits well with the windy nature of the city;
- **Amber** used as the unifying element for the neighbourhoods. This is one of the symbols of the city. The 'Lielais dzintars' ('Big Amber') concert hall and its immediate surroundings form the heart of the city, and a central point of night-time activities. The use of amber colour in lighting extends throughout the city and can also be found in the architecture of principal landmarks. In addition to the symbolic meaning of the colour of the lights, it has a positive effect in terms of reducing light pollution, because of its lower environmental impact, as compared to bluish white lights;
- **Sustainability.** The lighting plan is based on creating safe connections between the city's neighbourhoods, its nodes, and points of activity at night, providing full functionality, and avoiding wastage of light. Aspects associated with light pollution and advantages of smart technologies were taken into account, and activities were planned to promote night-time urban spaces, with the goal of changing the negative attitude towards darkness among the public.

**Lighting hierarchy.** All of the nightscape elements listed above must be taken into account in developing a city lighting master plan. However,

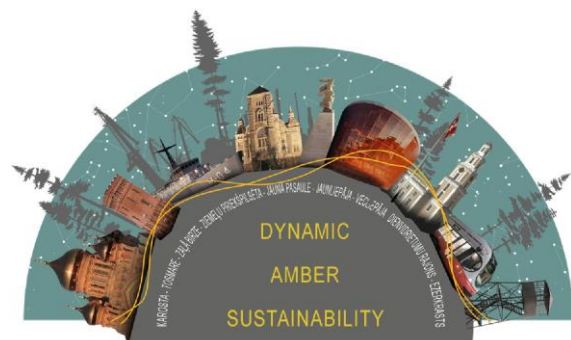


Fig. 4. The concept of Liepāja lighting master plan [8]

creating a balanced and functional space in the city, one must additionally define zoning with different lighting intensities, based on the value, type of development, amount of natural environment, and the level of use of the areas in question. Creating a hierarchy of lighting adds dynamism to the nightscape, helps with navigation through main traffic routes, and provides compositionally appealing and diverse views. In addition, properly adapted levels of lighting intensity help reduce light pollution. Four artificial lighting level zones are defined in Liepāja, see Figure 5, 6.

**The image of the city.** Liepāja is referred to not only as the city of winds, but also as the city of amber. This is reflected in one of the city's most prominent architectural sites, the 'Lielais dzintars' ('Big Amber') concert hall, and the 'Dzintara pulkstenis' ('Amber Hourglass') urban object set up in the nearby pedestrian street and designed with the involvement of Liepāja's citizens. It is proposed to bring the symbol of this golden stone of the sun to the night-time cityscape, thus unifying different neighbourhoods. First, it is the use of amber-coloured lights for decorative purposes in locations where good rendering of colour is not a priority, providing lighting of objects, connections, amenities. According to literature, in addition to

strengthening the city identity, the use of golden-colour lighting is more environmentally friendly than that of bluish lights. Second, it is the thematic design of outdoor objects and municipal improvements that include irregular, round and oval shapes, similar to those of amber. In addition to the aesthetic benefits that these objects create in the urban space, they could function as larger or smaller-scale aids in navigation.

**Smart technologies.** Smart technologies can help the city improve its energy efficiency, make its outdoor spaces safer, improve traffic, and meet the needs of its residents. In subsequent modernisations of the lighting system, it is recommended to install even more efficient and dynamically adjustable lights making it possible to set the intensity of individual lights or groups of lights adapting them to the given situation at night. A combination of three lighting control strategies can be used:

- Astronomical timer, calculating when the lighting is to be used based on the individual time of sunrise and sunset every day;
- Natural light analysis, adjusting the intensity of the light based on the amount of natural lighting detected by sensors;
- Traffic detection, adjusting the intensity of the lighting based on motion sensors [1].

It is proposed to combine lighting elements with



Fig. 5. Proposed lighting hierarchy [8]



Fig. 6. Overview of the proposed Liepaja lighting master plan [8]

other smart technologies, thus improving their functionality. Lighting poles could be equipped with charging stations, interactive information panels, Wi-Fi routers, surveillance cameras, sensors analysing air quality, noise pollution, weather, traffic intensity, and availability of parking space. In addition to all of that, one can use solar or wind energy to power the smart systems [1].

### Conclusions

The development of a city lighting plan plays a critical role in defining the perceptions of night-time urban spaces by their users, and in promoting tourism. There is economic benefit to be gained from increasing the time the urban environment can be used within the 24-hour day. Improving the aesthetic and functional qualities of the night-time cityscape increases the quality of life of local residents and strengthens the city's identity. Reducing light pollution makes it possible to contribute to combatting rapid climate change.

In order to ensure successful implementation and sustainability of the city lighting plan, the local government must collaborate with organisations as well as private citizens. Changing the night-time urban space is easy: all that is necessary is to provide light. It is necessary to develop rules about the lighting of various advertising elements, shopping windows, and signage, in order to prevent the overall balanced night-time image of the city and

its colour palette from breaking apart. One must determine the maximum acceptable levels of lighting intensity and colour. Provisions must be introduced requiring that the lighting of public buildings and buildings located along major streets must be approved by the local government. It must be ensured that spaces within individual blocks be aesthetically harmonised. A more creative approach is possible in smaller urban spaces, because these are only visible from shorter distances. In setting up lighting on the upper floors of buildings or in larger structures, one must assess its impact on the appearance of the city's skyline and cityscape. Light festivals are a possible option for encouraging public interest in the use of night-time urban space and promoting tourism. They are an opportunity to show the city from a different perspective and cultivate a feeling of pride among its residents. At the same time, it is important to educate locals and the public as a whole on the value of night-time outdoor spaces, their special mood, as well as the consequences of light pollution. This can be achieved by promoting astronomy, and organising events associated with it. There is value in preserving dark-sky areas for stargazing within the city boundaries. The primary goal for the engagement of the public is to change the centuries-old negative attitude towards darkness and understand that living organisms need it.

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**Kopsavilkums.** Mūsdienu tehnoloģiju attīstības un urbanizācijas iespaidā, pilsētas spēj nodrošināt plašu pakalpojumu klāstu arī pēc tumsas iestāšanās, kas nozīmē to, ka nakts ainavtelpas kļūst arvien intensīvāk izmantotas. Pētījuma mērķis ir izstrādāt rekomendācijas nakts laika ārtelpas un tās elementu plānošanai pilsētvidē, kas uzlabotu funkcionālo un estētisko kvalitāti, kā arī mazinātu gaismas piesārņojumu. Mērķa sasniegšanai veikta teorētisko materiālu izpēte, lauka pētījumi un fotofiksāciju uzņemšana teritoriju izvērtēšanai, iegūto rezultātu apkopošana un grafiska attēlošana. Lai risinātu ar nakts ainavtelpām saistīto problemātiku uzmanība pilsētas līmenī tiek vērsta apgaismošanas ģenerālplānu izstrādei. Ar plānu palīdzību iespējams veicināt tūrisma un ekonomikas attīstību, kā arī uzlabot iedzīvotāju labklājību. Pilsētas līmenī nakts laikā nozīmīgi ir tādi elementi kā malas, apkaimes, ceļi, vietzīmes un aktivitāšu punkti. Minētos elementus nepieciešams identificēt uz izcelt atbilstoši izstrādātajām rekomendācijām. Piedāvātā Liepājas pilsētas apgaismošanas plāna attīstība stiprinātu pilsētas identitāti, veicinātu drošu nakts ārtelpas izmantošanu, ērtu orientēšanos un nodrošinātu estētiskus skatus. Papildus, tā ir iespēja mazināt gaismas piesārņojumu un pievērsties ilgtspējīgiem risinājumiem, pielietojot dažādas ar apgaismojumu saistītas viedās tehnoloģijas.



# Objects-memes in the architectural organization of attractive urban public spaces



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**Abstract.** A methodology is proposed for the architectural organization of new and activation of existing abandoned, degrading urban spaces and their transformation into attractive public spaces through the introduction of new architectural objects-memes into them, which will bring new emotional and functional content to these places. The notions of a meme in architecture and object-meme are introduced and scientifically substantiated. The last one is proposed as a tool for activating and increasing the attractiveness of existing and new various urban public spaces and, in particular, city parks and squares. The questions that object-meme must solve for this are generalized and systematized. Based on an international sociological video experiment on the perception of different people in different urban public spaces, the characteristics of the last ones, which evoke positive emotions in most people in them, were analyzed and summarized. Recommendations are systematized on the architectural and functional organization of such spaces, in particular city squares and parks, and the placement of objects-memes in them. Approbation of the put forward theoretical provisions is presented in the conceptual projects for the creation of a new city square in the historical part of Kyiv and the revitalization of the existing degrading park in the Gran-San-Blas area in Madrid.

**Keywords:** objects-memes; public space; squares and parks

## Introduction

The issues of activating and increasing the attractiveness of existing urban public spaces, as well as creating new, attractive, and comfortable for people, remain relevant for the present and require new approaches to solve them. We are talking about increasing their architectural, cultural, social, and economic attractiveness for a high-quality and interesting stay in them for different people. There is a need for a new methodology for creating new or transforming existing urban public spaces into attractive ones and finding new tools to bring new emotional, cultural and functional content to these places and attract people to them. This will allow both to revive abandoned urban spaces and to get new attractive and active ones, which will revive the city as a whole and ensure its sustainable development.

It should be noted that many scientists from around the world have been studying urban public spaces. In their scientific theories, they touched on various aspects of this issue. It is necessary to note the works of J. Gehl [4], M. Gusev [5], J. Jacobs [6], O. Dida [3], K. Lynch [18], and N. Sosnova [27], concerning the urban environment and urban lifestyle. It is also worth highlighting the studies of the emotional and aesthetic component of public spaces carried out by C. Day [2], A. Ikonnikov [13], P. Nas [19], G. Osychenko [21], N. Shebek [26], their landscape components - in the works of Yu. Ivashko [14], T. Kuzmenko [14], S. Li [14], P. Chang [14], I. Rodichkin [23], L. Ruban [24], the

issues of transformation and activation of degrading historical urban spaces - in the articles of N. Leshchenko and V. Tovbych [16, 17]. Of great importance are the theoretical works on the phenomenological approach to the creation of the architectural environment by E. Husserl [12], C. Norberg-Schulz [20], M. Heidegger [7], A. Perez-Gomez [22], and D. Weir [22], as well as the architectural projects of A. Siza [25], P. Ursprung [8], J. Herzog [8] and P. de Meuron [8], S. Holl [9], P. Zumthor [28]. It is also worth highlighting the works devoted to the study of social evolution and behavioral mechanisms in society by R. Dawkins [1] and D. Kahneman [15].

The analysis of the previous theoretical and practical experience in studying urban public spaces and park areas, in particular, showed a significant contribution of these scientists and practicing architects to solving various aspects of this problem, but the issue of their semantic architectural stereotypes has not been studied enough. There are no scientific works on the influence of the objects-memes, identified in this article as conditionally super-contextual semantic architectural stereotypes of urban public spaces, on their activity and attractiveness. This is the reason for the relevance of this study. It is determined by the need to give practical recommendations and show how architectural objects-memes can influence the attraction of people to new urban public spaces, parks, and squares, as well as increase the

attractiveness and activity of existing ones that are currently inactive or abandoned and empty.

The aim of this research is to propose a methodology for activating and increasing the attractiveness of urban public spaces through the insertion of new architectural objects-memes into them, which will bring new emotional and functional content to these places. And also to show on examples the practical application of the put forward theoretical provisions. The scientific novelty lies in the introduction and scientific substantiation of the notions of a meme in architecture and objects-memes, as tools for activating and increasing the attractiveness of existing and new various urban public spaces and, in particular, city parks and squares.

### Materials and Methods

A methodology is proposed for activating abandoned, degrading urban spaces and transforming them into attractive ones through the introduction of new architectural objects-memes into them, which will bring new emotional and functional content to these places. This methodology includes the following research stages and their corresponding methods.

1. Logical analysis - to define the notions of "semantic architectural stereotypes", "architectural memes", "objects-memes" and establish their relationship. Objects-memes were defined as conditionally super-contextual semantic architectural stereotypes of urban public space.
2. By generalization, 6 groups of questions were identified (namely: cognitive, aesthetic, compositional, functional, socio-economic, urban planning), which objects-memes solve to activate existing and form new urban public spaces, including city squares and parks, that positively affect on person's feelings in them.
3. Using the video experiment method, an international sociological study the "Architecture and Happiness" was conducted and information was obtained on the perception of urban public spaces by different people, and the relationship and influence of the urban public spaces on a person's feeling of happiness in them were determined. The video experiment included a video survey, analysis and systematization of the data obtained, the creation of a video series of the most interesting answers, and the synthesis of the characteristics of an urban public space that is close to ideal, causing positive emotions for a person in it, as well as objects of public spaces that cause the greatest emotional response.

The video survey was conducted both in person and remotely. Respondents were asked to answer 8 questions. For the remote survey

questions were recorded on video and presented online. The longest question was 50 seconds. All questions were interconnected with each other - from general ones related to the theme of happiness and its feeling to specific ones, which concerned objects of architecture and urban public space, as well as what people notice in them in the first place and what they focus on afterward. The survey ended with questions about the characteristics of an ideal or almost ideal public space of the city for each respondent personally and about the importance of material wealth against the backdrop of a comfortable and happy public space.

Each video with the answers of one person took 30-40 minutes. Based on their analysis, the most frequently occurring answers for each of the 8 questions were identified and their percentage ratio was established. The most interesting of them were systematized respectively in 8 series. The duration of each episode is 20-30 minutes. The answers received became the basis for the synthesis of the characteristics of the urban public space, which causes a positive response in a person, and which causes a negative one.

4. By the methods of formalization and generalization, the characteristics of the urban public space, close to ideal, evoking positive emotions in a person, were identified, which became the basis for recommendations on its organization.
5. With the help of systematization, recommendations on the architectural and functional organization of urban public spaces and the placement of objects-memes in them were summarized as ecological, compositional, morphological, cognitive, functional, and socio-economic.
6. The method of experimental design was applied to test the put forward theoretical provisions and create concepts for the city square and revitalize the park.

Further, the article reveals the above stages of the study, shows the influence of architectural memes on the activity and attractiveness of urban public spaces, particularly city squares and parks, and gives practical recommendations for placing objects-memes in them. And also their effectiveness is demonstrated in the examples of organizing a new city square on the site of an abandoned territory in the historical part of Kyiv and revitalizing the degrading city park in the Gran San Blas area in Madrid.

## Results and Discussion

### **The notion of a meme in architecture. Objects-memes are conditionally super- contextual semantic architectural stereotypes of urban public space**

Each urban public space, including city squares and parks, is determined by certain semantic architectural stereotypes. They bring a certain meaning to this place, define its features and identify it. They form certain characteristics of this place, thanks to which it becomes recognizable and attractive. The place attracts different people who come there on business or spend their free time.

So, the semantic architectural stereotypes of a certain urban public space can be determined as objects, fragments, or details - symbols that carry a certain stable semantic meaning and identify the content and purpose of this place and its perception by a person, providing its semantic content [11]. For example, the town hall or city scales are semantic architectural stereotypes of any city market square.

By analogy with the commonly used notion of a meme, it's possible to define the notion of a meme in architecture. A meme in architecture (architectural meme) is any physical object of the architectural environment with a message and meaning embedded in it, which are clear to everyone at the first acquaintance with it and do not require the necessary explanations and urban context, is popular and relevant for different places, provides their semantic content and easy person's perception [10].

Unlike the generally accepted notion of a meme, architectural memes are always material and carry not only an emotional, cultural and meaningful but also a functional message. And this message is relevant for any public space in the city.

And if we trace the connection between architectural memes and semantic architectural stereotypes, then architectural memes can be defined as semantic architectural stereotypes that are not conditionally tied to any context. Their content is always clear, regardless of the context. However, their form can be adapted to the context in which they are replicated. The original meaning of architectural memes can also change, and then they will perform a different function in a different space.

Architectural memes manifest themselves through the objects-memes. They can be defined as follows.

Objects-memes are integral objects that carry a certain stable semantic meaning, are understandable to everyone at the first acquaintance with them and do not require the necessary explanations and urban context, and, therefore, are conditionally super-contextual semantic architectural stereotypes, provide the semantic content of any urban public space and its perception by a person, and they can adapt to any context [11].

In general, most urban public space landscaping objects can be considered objects-memes. These may include traditional sculptures, lanterns, flowerbeds, benches, fountains, as well as facade elements (immersive 3D billboards, green facades, murals) and the building as a whole (galleries, buildings with arcades and colonnades on the ground floor), which are part of, shape, or separate one space from another, as well as modern kinetic sculptures, strumps, open pavilions, and even immersive performances.

A certain architectural object can become an object-meme only if it goes through the stages of "memization" and has such characteristics as precedence of occurrence (should carry information about the source of its occurrence); objectivity (should have content and functionality understandable to everyone) and replicability (be able to replicate); universality (to be super-contextual); "virality" (easily and quickly spread and bring resonance in a new place).

Thanks to the objects-memes, the very long and difficult to describe the meaning of space is conveyed more simply - due to their specific location in it, through their shapes, dimensions, textures, colors, and their combinations, as well as introduced functions. This meaning affects a person, becomes clear to him, depending on how much he focuses on these objects, how much they impress him. They can also tell a person how to behave in a space, what is allowed, and what is forbidden to do.

So, it is possible to summarize the issues that objects-memes should solve to activate existing urban public spaces and in the formation of new ones, in particular, city squares and parks, which are positively affected a person's feelings in them, namely:

- cognitive - they should become environmental landmarks and attractors;
- aesthetic - they should increase the visual quality of the space;
- compositional - should organize and physically fill this place;
- functional - should contribute to its functional content;
- socio-economic - also should help to attract attention and attract people to this space, thereby increasing its social and economic activity;
- urban planning - should determine the urban centers of gravity.

### **Characteristics of an urban public space that evokes positive emotions in a person**

Thanks to the international video experiment "Architecture and Happiness", it was possible to obtain information about how different people perceive urban public spaces. A total of 1981 respondents from 29 countries were involved in the

survey. Of these: 41% - men, 59% - women; 3% - under 13 years old, 24% - 13-20 years old, 51% - 20-30 years old, 13% - 30-60 years old, 9% - 60 years and older. At the same time, 56% of respondents consider themselves happy or very happy, 11% - were partially happy, 10% - were more unhappy than happy, and finally 23% - answered that they are not happy at all. The vast majority of the happy are women aged 18-23 (67%), and the vast majority of the unhappy are men aged 25-30 (55%).

Among the respondents, 68% of those who are likely to be observers of certain events in urban public spaces, and 32% of those who are likely to become their active participants, were identified. This is important when filling the urban public space, both with places for active actions and places for quiet rest, and observing these activities.

It has been established that there are no specific objects or certain elements that are guaranteed to make architecture and space happy. There are situations in which a person is on an emotional upsurge, gets new impressions, and reacts positively to the environment. Or certain events that impressed and liked occurred in a certain space, and as a result, a person developed positive memories of this space. Consequently, certain actions and events in the architectural environment affect the perception of it by a person. The fact remains indisputable that for a positive perception there must be an active urban public space, which is provided with a variety of functional content and its high-quality arrangement.

After analyzing and summarizing the answers of the respondents, the qualities of existing urban public spaces which positively affected people's moods and those which caused negative emotions were identified. The formers are characterized by the following: 1) natural, environmentally friendly coatings and finishing materials; 2) forms that mimic the natural environment; 3) dimensions corresponding to the human scale; 4) surface texture imitating natural coatings or their motifs; 5) the presence of objects or surfaces in their decoration, that dampen the noise of the city, absorb sound ("green facades", natural and artificial "screens"); 6) the absence of very bright, pulsating light for lighting and advertising, etc. Successful combinations include combining artificial water features (such as fountains) with places for leisure (seating, socializing, street food, etc.) and complementing them with places for creative activity (street "live" music). Among morphological combinations, the most acceptable is the combination of fluid forms with broken lines, and not focusing on only one type.

The characteristics of objects that cause negative emotions are: 1) aggressive broken lines, and sharp forms; 2) repulsive design with far from natural

color combinations; 3) disharmonious textures; 4) the presence of signs of damage to objects (soot, cracks, dirt, etc.); 5) the absence of forms or objects in general that protect a person from various adverse weather conditions; 6) the presence of inappropriate inscriptions, graffiti.

The experiment confirmed the author's hypothesis regarding the objects-memes, which are connecting "bridges" between a certain urban public space and a person's feeling of happiness in it. A person remembers a certain space, and he likes it because of the events that take place there and the positive emotions he has experienced there. Objects-memes help to activate this space through its emotional, cultural, meaningful, and functional content. They activate certain actions and events in it, with which a person will later associate this place and for the sensation of which he will return there again. So, the objects-memes can be considered as tools for evoking an emotional response, activating fantasy, associations, and a positive reaction of a person to a certain place and to what is happening in it. And thanks to these sensations, a person feels happy in this place.

By formalizing and generalizing the answers of the respondents from the video survey, it is possible to identify the characteristics of urban public space, close to the ideal, evoking positive emotions in it, namely:

- the unity of natural and artificial surfaces;
- coziness through the selection of small spaces in the overall composition and their connection into one whole;
- the co-scaling of all objects and space as a whole with a person;
- natural colors of ordinary artificial elements of space;
- safety and attractiveness in the evening hours due to the presence of artificial lighting;
- cognitive ease due to the presence of landmarks and attractor objects, which can also become objects-memes;
- accessibility for different people; activity and comfort due to the presence of places protected from adverse weather conditions;
- uniform distribution of the various functions in the space to evenly load and activate the various events in it.

These characteristics became the basis for recommendations on the architectural and functional organization of urban public spaces, in particular, squares and parks, and the placement of objects-memes in them. The proposed recommendations were systematized as:

- ecological - a harmonious combination of natural and artificial components in the surface finish of objects (objects-memes) and entire planes of spaces, equipping them with elements for power





*Fig. 1. The project site, 2021 [the authors' photo archive]*

and energy accumulation from renewable natural sources;

- compositional - co-scaling with a person and allocation of "chamber" places in the overall space, combining them with a common connecting element - a new object-meme; the possibility of hyperbolized scale only in some details of objects-memes for their attractiveness; morphological - the use of a combination of rectilinear and curvilinear forms in the shaping of new objects-memes, in the allocation of individual areas or levels in the existing space, and the formation of levels in the new one;
- cognitive - the use of natural colors in the decoration of all artificial surfaces of the space, which are the background, and the possible use of bright colors to highlight certain details or objects-memes, which should become its environmental landmarks and attractors; the introduction of elements of artificial lighting to highlight new objects-memes, as well as the provision of possible different lighting scenarios for daily and holiday activities and events in space, which will contribute to its attractiveness;
- functional - filling the space with different functions and their even distribution for attractiveness and activity of different zones of squares and parks and avoidance of point load;
- socio-economic - ensuring accessibility of spaces for all people, filling them with equipped places for a comfortable long stay, which together with the functional filling will provide their social and economic attractiveness; avoidance of dangerous crossing of pedestrian and transport routes.

The above theoretical provisions were tested in the creation of the concepts of a new urban square in Kyiv and the revitalization of an abandoned park in Madrid. These projects, described below, illustrate the proposed recommendations for creating an active and attractive urban public space in place of the abandoned and unused.

### **The concept of a new city square named after Vasyl Slipak on Andriivsky Descent in Kyiv**

The project site is located on Andriivsky Descent 33/6, in the Podilsky district of Kyiv, in the heart of Podil. It is included in the complex protection zone of cultural heritage monuments. There are several architectural and urban planning monuments of local importance on the adjoining territory. The surrounding buildings are also formed by significant and ordinary valuable historical buildings. The place for the future square is allocated from the west and south by ordinary valuable historical buildings, from the north and east - by Borychiv Tik Street and Andriivsky Descent, respectively [Fig.1].

To date, the site is not used in any way and is gradually losing its social value, and its neglected state greatly reduces the aesthetic and architectural value of the existing historical urban environment as a whole. The idea of creating an art square on this site, which combines memorial and various urban functions, will contribute both to the restoration of the architectural value of the historical environment and the attraction of different people, which will greatly increase its social and cultural value.

This concept of organizing a square - a new urban public space - was based on such principles as: hereditary continuity and diversity; cognitive ease; compilerity; attractiveness; multifunctionality and variety of functions. To reveal them the following techniques were used: the combination of "active", "neutral" and "passive" zones of space into a single whole; filling it with chamber "half-closed" places; preservation of traditional material and color in decoration; symbolism in the visual design of objects-memes or their details.

The new square will become a symbol of memory for the outstanding Ukrainian singer, man-patriot Vasyl Slipak, who died fighting for the independence of Ukraine, and at the same time a modern active place for



*Fig. 2. The concept of a new city square named after Vasyl Slipak in Kyiv, 2021 [created by the authors]*

urban cultural events, as well as a place of resting and leisure for locals and guests of Kyiv. The proposed memorial sign - the treble clef - will become a new architectural semantic stereotype of this place and a symbol of the eternal song that Vasyl Slipak carried to people, and which will now be performed by other people from the open stage of the city square.

The idea of using the notes from the Ukrainian folk song, Vasyl Slipak's favorite song, "The moon in the sky, the stars are shining" in the decor of the fence of the public square is also symbolic. The words from its text are perforated on the stainless steel strips fixed on the first section of the fence wall. Other parts of this existing wall have been proposed for a themed mural.

The existing relief and landscape of the site are harmoniously integrated into the new public space - used as an amphitheater and terraces for relaxation, tactfully inscribing in the surrounding context. The scale of the space and all new elements in it is subordinated to the existing historical one. The interests of both the surrounding urban environment and landscape and, first of all, the people in them, their comfort of movement, and different durations of stay are taken into account. It is proposed to arrange fountains in the center of the square. They will bring freshness on hot days, will attract people to this place, make them feel comfortable, and will also serve as entertainment for the children.

The square is multifunctional. It has places for both quiet rest and cultural activities, impromptu music concerts, dances, and masterclasses on them, as well as places for outdoor coworking. Everyone can comfortably spend their free time, take an active part in the ongoing urban performance, or just watch it.

The amphitheater, fountains, thematic murals on the existing wall enclosing the space of the square

from the west, places for coworking and quiet rest – these are new objects-memes that will become attractors for this place, increase its architectural, emotional, semantic, and functional value. They will attract different people with different interests to this place, will activate the daily urban performance in it, and get bright impressions and positive emotions from what is going on. As a result, the space will be alive and may become one of the favorite places in the city for many people [Fig. 2].

The above recommendations are an illustration of one of the most effective combinations of different techniques for the architectural and functional organization of urban public space and in particular the square, namely: the use of terracing and "geoplastics" in combination with the introduction of a contrasting bright color in some details, parts and whole planes of space, the creation of murals on the blank facades of buildings and filling the space with active urban sites. Together, they greatly enhance the effects of qualitative changes to create an attractive, iconic place in the city, interesting and convenient for different people.

### **The concept for the revitalization of a park in the Gran-san-Blas area of Madrid**

This concept was made as part of the international competition "Multicomfort House", where it received the second prize.

The design site was located at Calle Nueve 6-10 in the Gran-San-Blas area in the western part of Madrid. The area was mostly built up in the 50s and 60s of the last century with typical 4-5-story residential buildings. Approximately 30 % of its inhabitants are elderly people. Here you can freely walk without a crowd of tourists - the area is considered residential and industrial.





Fig. 3. The revitalization concept of a park in the Gran-San-Blas area of Madrid, 2017 [created by the authors]

The main objective of this project was a new vision of urban revitalization for a community living in characteristic typical buildings located around the abandoned area of a small park. Among the priorities are improving the quality of living, as well as turning an abandoned park into a place for a comfortable stay, attractive to people of all ages.

The key principles applied in the concept of the revitalization of the park in Gran-San-Blas were the following: compilerity; attractiveness; multifunctionality and variety of functions. They were revealed in such techniques as the combination into a single whole of "active", "neutral" and "passive" zones of the space; filling it with chamber places; as well as the introduction of a contrasting bright color in some details and entire planes. To accommodate new potential objects-memes in the park, the principles of situational tolerance and cognitive ease were proposed with their disclosure in such techniques as preservation of traditional material and color in the decoration of new objects-memes to maintain the coloristic integrity of the space; the combination of the originality of form with an unusual functional content of the objects-memes; introduction of new objects-memes as environmental landmarks and attractors [Fig. 3].

So, according to the concept in the park, it was proposed to single out and combine into a single whole its "active", "neutral" and "passive" zones. This makes it possible for different people with different preferences to find a place to comfortably

spend their free time. The "active" zone was presented by two themes - "Active Recreation" and "Cultural and Cognitive Space". The first theme included outdoor playgrounds, designer swings, traditional Spanish street games. The second was a public art object - the "Infinity Cognition Ribbon", which brought a cultural and cognitive function to the park. It is a potential object-meme. The "neutral zone" was formed by the "Wish Board" installation, where every conscientious resident of the district will be able to express their comments, suggestions, and wishes for its improvement for consideration by the local authorities. The Wish Board itself is also a potential object-meme, could be relevant elsewhere and easily replicated there. The "active" and "neutral" zones with their functions were united by a common artificially created stream - the "Water Ribbon", which is the axis of the park, as well as another object-meme. Places for a quiet rest were strung on it, which formed the "passive" zone of the park.

A new object-meme – the "Wish Board", was proposed to be made in bright yellow, with a frame in the form of an unclosed circle and with moving elements that can rotate around its axis. Such morphological and coloristic solutions are aimed at highlighting and attracting people's attention to this object. Its attractiveness was also enhanced by its location on the central compositional axis, between the two entrances to the park.

An artificial stream - the "Water Ribbon", symbolizes the unity and diversity of space and emphasizes the continuity of the historically established recreational significance of the park and its content (places for meetings, communication, pastime, relaxation, or solitude). It is also a new object-meme – an attractor and landmark that provides attractiveness, comfortable microclimate, and a cognitive lightness of space. Its symbolic meaning of diversity is manifested in the change of form and separation in a single space of the park of different functional areas, open active and chamber "closed" for relaxing rest, which attracts the attention of different people.

Thus, the attraction value and activity of the park after its revitalization will be ensured both by the uniqueness of the proposed objects for its filling – the "Wish Boards", the "Infinity Cognition Ribbon", the "Water Ribbon", and by the places for traditional street games and comfortable quiet rest. These are all new objects-memes that functionally and morphologically reinforce each other and together lead to the revival of this place and its positive emotional content.

### Conclusions

Summarizing all of the above, it can be noted that the proposed methodology for the architectural organization of new and the activation of abandoned urban public spaces through the introduction of new objects-memes into them, which will emotionally and functionally fill these places and will help attract different people, is effective. This is confirmed by

the approbation of the put forward theoretical provisions in the developed concepts of organizing a new and revitalizing an existing square and park in different cities of different countries. The proposed practical recommendations for the architectural and functional organization of urban public spaces and the placement of objects-memes in them are also relevant to different places, including urban squares and parks, and provide an opportunity to activate and increase their attractiveness.

The results of the conducted sociological video experiment show that such transformations are necessary to improve the quality of many existing public spaces in different cities of the world. And objects-memes can become tools for activating them, increasing their attractiveness, and attracting people's attention. They will become the "bridges" connecting a certain urban public space with positive emotions and people's feeling of happiness in it. The interconnection of this space and the positive feelings of people in it occurs through the receipt by them of impressions and emotional responses from certain actions and events, which can take place in this place exactly due to its certain characteristics and be activated by new meme objects. It is for getting positive emotions from a comfortable stay in a certain place that people will return to it again. And this will revive this place, increase its architectural, social and economic value. And in general, the attractive and active urban public spaces become indicators of the activity and liveliness of any city and its sustainable development.

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**Kopsavilkums.** Tiek piedāvāta metodika jaunu pamestu, degradējošu pilsētelpu arhitektoniskai organizēšanai un esošo pamestu, degradējošu pilsētelpu aktivizēšanai un pārveidošanai par pievilcīgām publiskām telpām, ieviešot tajās jaunus arhitektūras objektus-mēmus, kas šajās vietās ienesīs jaunu emocionālu un funkcionālu saturu. Tiek ieviesti un zinātniski pamatoti jēdzieni mēms arhitektūrā un objekts – mēms. Pēdējais tiek piedāvāts kā instruments esošo un jauno dažādu pilsētas publisko telpu un jo īpaši pilsētas parku un skvēru aktivizēšanai un pievilcības palielināšanai. Jautājumi, kas objektam-mēmam tam jāatrisina, ir vispārināti un sistematizēti. Balstoties uz starptautisku socioloģisko video eksperimentu par dažādu cilvēku uztveri dažādās pilsētas publiskajās telpās, tika analizēti un apkopoti dati, kuri lielākajā daļā cilvēku tajās izraisa pozitīvas emocijas. Sistematizēti ieteikumi par šādu telpu, īpaši pilsētas laukumu un parku, arhitektonisko un funkcionālo organizāciju un objektu-mēmu izvietojumu tajos. Izvirzīto teorētisko nosacījumu aprobācija ir sniegta konceptuālajos projektos jauna pilsētas laukuma izveidei Kijevas vēsturiskajā daļā un esošā degradējošā parka atdzīvināšanai Gran-San-Blas rajonā Madridē.

# Cinematic methods of scenario construction in the design of landscape parks

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**Abstract.** The article describes and analyzes the possibility of using the method of writing a cinematic script in the design of park space, and it is a test of the method for teaching park design by the method of screenplay and generalization of the results. The authors analyze the possibility of applying this method in the actual design of the existing architectural environment of the city and compare the results with the results of their colleagues from another educational institution of architectural profile in performing similar tasks. The article proves that the cinematographic script, not the theatrical one, is the most suitable for the analysis of the architectural environment and writing the script of its perception. Sid Field's film paradigm, based on Sid Field's film paradigm, is based on the slogan "Every moment the spectator should be interested in what will happen next?" modern city life. According to the screenplay, which has its own structural units, the territory of the park is also divided into several functional zones, each of which corresponds to the cinematic elements. As in the movie, each part of the park evokes certain emotions, which are programmed by the designers in advance. This can be done by manipulating space and its boundaries. The authors suggest that this method of cinematic scenario can be used in the design of the architectural environment of the city, as a new part of it (urban quarter, neighborhood, and district) and in adjusting the existing historical environment.

**Keywords:** architectural environment; landscape; method of cinematographic script.

## Introduction

Architecture is perceived by man with all his senses, but the main amount of information is transmitted by sight, and a fuller amount of information is obtained during movement. Gradually, foreshortening by foreshortening, view by view, a complex space of an object opens up to a person, which consistently forms an image in our consciousness. In the architectural and design aspect, the "experience" of time and space occurs during the movement of the viewer along a route in which the environment is a giant theatrical scenery, which provokes the creation of an environment of communication and social contacts. Apart from architecture, the only art that offers a similar experience of space is cinema, where the movement of the camera replaces the real movement of the body in space.

The frame is the primary structural element of the film, and its frame is a seeker of the species. Consecutively mounted frames form the next, more complex structural element of cinematography - the stage. The stage is the simplest linguistic construction of cinema - a phrase that is built on certain grammatical and syntactic laws. Several scenes, combined into a coherent semantic structure, form a more complex structural element of cinematography - an episode that carries a dramatic load, in contrast to previous elements. The sequence of episodes, united by the idea and the plot, forms a coherent film - a film.

If we translate these definitions into architectural language, the frame is a fragment of space that a person sees in one fixed position (view from one point). According to physiologists, objects relative to the viewer are limited to a vertical angle of 20° and a horizontal angle of 120-160°. The zone of optimal visibility is limited by the field: up - 25°, down - 35°, right and left - 32°. This is the boundaries (framework) of the natural frame.

Several perspective shots of a place, an area that can be covered at a glance (architectural ensemble or objects in the square, perspective opening of the street we are moving on, the opposite side of the street we are contemplating, etc.) correspond to the cinematic concept - stage. A scene in the semantic sense corresponds to a phrase, while a frame corresponds only to a word.

Scenes form episodes - sentences. These are independent fragments of the architectural environment with a clear spatial framework, appropriate material content and social processes. Due to the fact that these fragments (episodes) can differ significantly from each other, the "joints" between them are the sharpest and most noticeable. If we look for correspondence in the structure of the city, the frame is a specific place in the city (point), the scene is analogous to the quarter, the episodes are districts, and the whole film is a city.

The cinematic principle of editing corresponds to the movement of the human gaze from fragment to fragment and a rather narrow area of clear perception. It is this vision of the frame behind the scenes that brings cinema and architecture closer together, and therefore allows us to talk about the possibility of specially constructed frames, manipulation of the gaze, its deliberate direction – that is creating a certain scenario of perception of the architectural environment.

The cinematic scenario approach to the design of the architectural environment involves purposeful programming of visual impressions in order to increase its expressiveness. Even the transition from room to room, from yard to street, from street to square, from space to space sets the environment the necessary rhythm – noting the joints (thresholds) of frames, episodes. The sequence of these episodes, united by an idea, a plot, forms an architectural work that has meaningful, informative and pictorial integrity. The structural commonality of cinema and architecture is the need to consistently combine the most expressive types over time, while at the same time getting rid of less expressive and secondary ones. Thus, cinema is a valuable source of knowledge for architecture about the logic of perception of spaces and objects in a variety of life situations.

### Materials and Methods

Since the 1970s, the topic of the scenario approach to the design of the architectural environment has from time to time become the main one in scientific publications in the field of architecture, however, despite their significant number, it still remains unresolved. Despite the widespread use of the term "scenario approach" in relation to the design of the architectural environment, there is currently no single point of view on this concept, and even more so, a single acceptable or universal method of its application. Most of the publications deal with the programming of impressions in the historical environment of the city, especially when compiling a tourist route D. Erovikova [4], M. Isupova [7], A. Krashennnikov [8], N. Morgun & L.M. Reznickaja, A.V. Skopincev [16]; scenarios of theatrical actions and performances in the existing urban or park environment O. Kuz'mina & E. Shvarc [9], Litvinov [11] and history of park building in different eras, when the park was perceived as a continuation of the palace and was designed for theatrical performances and masquerades D. Lihachev [10].

The topic of art synthesis has also been relevant since the 1970s, both in Ukraine and abroad, and therefore many publications are devoted to it. However, the synthesis of visual arts, such as

cinema, theater and architecture, has been studied very rarely, mainly in individual publications of film critics and linguists who have studied the semiotics of art. Among the theorists of architecture should be noted publications K. Ass [1], A. Rappaport [19], and for the last decade almost the only work devoted to the use of cinematography in architectural design was research A. Tokarev [20]. However, this experience is not given due attention in the professional culture today ... «The very attitude to cinema as entertainment, which equates the architect to the average moviegoer, is wrong, because it deliberately impoverishes and repeatedly reduces the amount of constructively useful for project practice information that can provide a film viewing» [20, p.7].

This paper considers the research of theorists of theatrical art and cinema, who within their areas considered the issue of writing scripts R. McKee [12], A. Mitta [14], A. Molchanov [15], S. Field [5]. In addition, this work is a continuation of previous publications of one of the authors of this article Olena Troshkina, which are devoted to the comparison of film, photo frames with natural frames and theatrical architectural environment, [21], [22] as well as continuing the cycle of scientific directions in the field of landscape architecture of the authors Luidmyla Shevchenko [2] and Natalia Novoselchuk [18].

As mentioned above, most modern architects consider the cinematic scenic approach to design as a creation of programmed impressions when creating a tourist route in the historic city centers, where the necessary impressions are made by architectural heritage sites. However, today there are almost no scientific papers, which would be based on knowledge of theatrical or film scripts, methods of writing a script for any architectural environment and would explain the principles of programming impressions and emotions in users. These tasks are solved in the process of studying the discipline "Landscape Architecture" with 4th year students of the Faculty of Architecture at the National Aviation University (Kyiv, Ukraine).

The purpose of this article is to describe and analyze the use of the method of cinematographic scenario in the design of park space, as well as testing the method of teaching park design by the method of film script and generalization of results, analysis of its application in real design.

### Methodology

First of all, in conducting this study to design the architectural space of the park, it is used cinematic script, not theatrical. This is primarily due to the fact that the cinematic script contains structural units that relate to the structure of the environment - shots, scenes, episodes, which is not in the theatrical script.

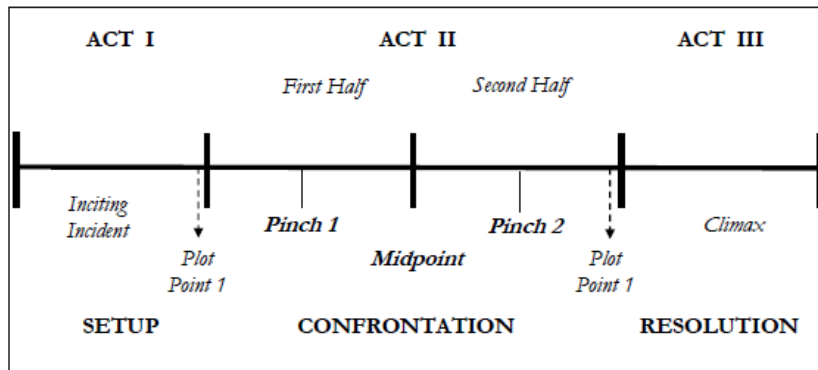


Fig. 1. The S. Field paradigm

The cinematic scenario differs from the theatrical one in more details due to the breadth and variety of the space, where the action takes place with a large number of scenery, unlike the theater, where space is very limited and conditional, and scenery changes according to the number of acts. Therefore, it is more logical to try to use cinematic tools to design both the architectural environment and the scenario of its perception, because in this case the main components of the "story" will be frames, scenes and episodes – their composition, methods of "joints" and montage.

Interestingly, the film critics themselves compare the process of creating a film with the construction process. For example, Nekhoroshev L.N. in his work "Dramaturgy of Film" he writes: "Cinema is not only art but also production. And the production is very complex: - Many people of different professions work on the film; - a lot of money is invested in the creation of the film; it is believed that the film in the box office should be profitable or at least justify the cost of its production. Therefore, before the start of film production, a lot of "engineering" calculations are performed. The production project of the picture is being developed, which includes: rehearsals of actors, sketches of scenery, estimates, etc. But the main component of this project is a director's script based on a literary script. And the fidelity of the construction of the whole film depends on how professionally the script was executed. Knowledge of the laws of screenwriting is as important as knowledge of the laws of architecture: incorrect calculation - and the city will fall. Hence the popular opinion among filmmakers: the script is not so much written as built [17, 9].

So, in order to "write" a scenario of perception of the architectural environment, we need to learn how screenwriters do it, explore their methods and try to apply these methods in architectural design - which was done during the teaching of "Landscape Architecture".

The study is based primarily on the film paradigm of Sid Field – a famous Hollywood

screenwriter, who is considered the guru of all screenwriters. He derived his paradigm of screenplay, which is defined as "a model, a model, a conceptual scheme." and is the simplest of all known paradigms, and therefore the most understandable for architects who are not experts in the field of cinema. Its essence is that every second of the film the viewer must think: "I wonder what will happen next?" and, accordingly, to meet this requirement, the whole script of the film is built.

In his book "Screenplay: the basics of writing" S. Field outlined the paradigm, the structure of which consists of three acts of the script, and each of the acts has its own task and even duration [5]. Graphically, the S. Field paradigm is shown in Figure 1 [5].

We will test and test this paradigm in the scenario approach to the design of the architectural environment during the design of the park, which was influenced by at least two reasons. The first is that the park can be designed "from scratch" in the free territory of the city, which is impossible on a site in dense urban development. Another reason is that the current requirements for the architectural environment of the park, as well as the city as a whole, are extremely consistent with the paradigm of Sid Field's film - all the time at every step should be interesting. This is dictated by the growing visibility and cinematography of the environment itself, as well as the requirements and needs of man, formed under the influence of modern cinema, the everyday atmosphere of the holiday in the city and the growing spectacle of public spaces. An inbuilt territory along the Dnieper River in Kyiv was chosen to test this cinematic method.

#### Results and Discussion

From the very beginning, the theme of the practical classes in the working curriculum of the discipline "Landscape Architecture" is the theme park project. Since the aim of the article is to apply a scenario approach to the design of parks and the development of methods, so the adjusted topic of the work was called "Designing a park on the script of a famous movie".



**Introduction:**

Paul Edgecombe is given after sleep in a shelter for the elderly. Takes bridges and goes for a regular walk in the forest. Later, while watching the film, Paul has flashbacks and decides to tell his friend Elaine his story.

**Main part:**

The plot takes place in several intersecting lines. The first and main line is John Coffey, who gets into prison and gradually wins the sympathy of the guards and proves his innocence. The second is Percy Uemnora, a mean and cowardly man with influential relatives who creates problems for the supervisors and ends up in a hospital for the mentally ill. The third mouse is Mr. Jingles, who was trained by one of the prisoners, and John Coffey Buna was trained in chemistry.

**Denouement:**

Elaine can't believe the story of Paul, who, judging by it, is 108 years old. Then he takes her to the forest and shows her a mouse that is still alive. Elaine is dead, but Paul is still alive and considers it his curse.

**Turning point:**

A new inmate, the dark-skinned giant John Coffey, appeared.

**Culmination:**

Execution of John Coffey in the electric chair.



Fig. 2. Structural analysis of the film "The Green Mile", stud. Galaiba K., Dukelska A., Osadchuk I., Polishchuk A.

To achieve the set goal, a significant number of hours devoted to practical classes had to be spent as theoretical (lectures), because students need to understand issues related to the theory of cinema, such as: what is a script; how the theatrical script differs from the film script; what is the structure of the film; what are the turning points of the scenario, etc. To do this, students read a lecture and were recommended to get acquainted with the theoretical works of famous screenwriters and film critics, and especially (due to the simplicity and accessibility of the material) with the lecture S. Field [13].

In addition, several hours of classes were devoted to the section on psychology, namely the psychology of perception, during which the following issues were considered: what are emotions; how long they occur; that can evoke emotions; which emotions are treated as negative and which are positive; how certain events are perceived and interpreted on the screen; how the configuration of space affects a person's emotional state, etc.

After such a theoretical preparatory period, students who worked in creative teams of 3-4 people were asked to choose a famous film and analyze its structure, showing it graphically in the appropriate diagram.

As an example in this article we will cite the works of two creative student teams that chose the screenplays of the films "The Boy in the Striped

Pajamas" by English screenwriter and director Mark Herman and "The Green Mile" by American director Frank Darabont.

Although the students chose the films independently, based on those they had already seen, to perform this task you need to re-examine the selected tapes and carefully analyze them according to the algorithm provided by S. Field in his above book [5]. Note that in this case, watching even a famous film requires concentration and careful analysis of the structure of the film - in contrast to the process of watching a movie for leisure. This process is very unusual but interesting for students of the Faculty of Architecture. The selected films were to be watched by all student groups. The form of practical classes is a discussion and discussion about what is seen: the plot, style, main scenes and episodes, the development of the protagonist and story lines, emotions that arise in certain parts of the film and more. Creative teams prepared for each other reports-presentations of the film and asked leading questions that helped to look at the film from a different, unusual for architect's angle.

*The first stage.*

*Structural analysis of the film*

Initially, students identified: the main parts of the film (connection → main part, culmination → denouement); turning points-hooks; divided the film into episodes and scenes. Thus, the film paradigm of

S. Field was studied at the first stage, and later it was manifested during the process of designing the park.

This structural analysis of the film was reflected by the students in the graphic works shown in Figure 2. It should be noted that already at this, the first stage there is a clear mutual influence of cinematographic art and architecture. The frame, scene and episode, as structural units of the film, are identified by the students, their composition and relationship are studied, and the turning points of the story are identified. All this was reflected in the architectural environment at the design stage of the park.

#### *The second stage.*

##### *Study of the tempo-rhythm of the film*

At this stage, students explore the tempo-rhythm of the film (the number of scenes and episodes in each part of the film and the frequency of their change), because when designing a change of impressions in the park you need to know how often these impressions change and where the highest voltage will affect, there will be a change in the plot line, and accordingly, the programmed emotions of the park visitor.

Note that the tempo-rhythm of the film depends on its genre. It is clear that an action, thriller or adventure film with a rapid plot development, frequent change of scenes differs significantly in its tempo-rhythm from melodrama or lyrical comedy. At this stage of the film's analysis, the functional purpose of the future park should be determined. In this process, we use the work of Ellard K. [3], who in his book "How architecture affects our behavior and well-being" presented the results of psycho-geographic research in the world. The scientist concluded that people often go to a place precisely because they want to feel its influence, and the choice of this place depends on the emotions that we, the people, want to get, and this can be compared with choosing the genre of film we choose to view. From the stay in the park we expect unloading and rest, from the amusement park - bright strong emotions, from the historical part of the old town - admiration for the beauty and beauty of streets and houses, etc. The researcher identified several types of places in urban space that affect our well-being and perception in different ways: places of passion, boredom, anxiety, reverence. Yes, "places of passion" are places where unpredictable situations occur, and, unexpectedly, suddenly. Here is manifested the initial human need for thrills, the desire to be in places where there is any complexity, hobbies, novelty and a lot of information.

This position of the author fully complies with the rules of a good film from a screenwriter: every second the viewer should be interested in what will happen next? Places of boredom are places of lack

of information, monotony, and low level of excitement and, as a result - stress. Lack of environment, affects behavior and brain function. Monotonous equally indistinct buildings, long fences, faceless monotonous cold areas - all this causes a feeling of boredom, bad mood and well-being. Boredom can cause significant stress. Ellard K. argues that arousal is a necessary condition for enjoyment of impressions. Because we are biologically prone to the desire to be in places where there is some complexity, fascination, where we receive information of one kind or another.

Places of anxiety are places where people feel that something is threatening them, and therefore - seek to leave them immediately. Anxiety is felt more strongly when a person sees that the path to escape is not straight, but wavy or blocked at all - this circumstance can lead to a state where a person cannot move at all.

The urban environment is alarmed by human crowds, unhealthy street noise, sharp corners and lines of architectural objects, cramped space, hypertrophied buildings, lack of viewing and shelter places, lack of risk of crime and aggression, blocked retreats, darkened places, material confusion etc. In urban areas of anxiety, a person may experience the phenomenon of cinematic uncertainty - the expectation of something negative, some terrible event that is about to come. Places of reverence evoke a combination of wonder and fear that arise when we find ourselves in a place where there is something beyond the familiar and recognizable, such as in front of a huge cathedral or standing on the edge of a canyon. The main thing here is the feeling of greatness.

When we are faced with a large space, be it an amazing landscape, a huge cathedral, an impressive town hall or a courthouse, one of our almost universal reactions is to look up. According to Ellard, it also allows us to feel positive emotions, to feel the comfort that comes from feeling connected to something great or even something divine [3, 95].

It is clear that all this classification of urban area can be easily transferred to the park area. Yes, places of passion - unexpected species that open when exiting a forest strip or shady alley on a meadow with a beautiful viewpoint; places of boredom - long multi-row alleys without accents and dominants and opaque ends of the route; places of alarm - cramped space, clearly directed and deprived of the opportunity to leave it quickly; places of reverence - panoramic viewpoints with wow effect, etc. It should be noted that students intuitively avoided melodramas and lyrical comedies when choosing films, even before getting acquainted with K. Ellard's research, rightly believing that their tempo-rhythm and vague plot turning points will not create an interesting composition of park space.

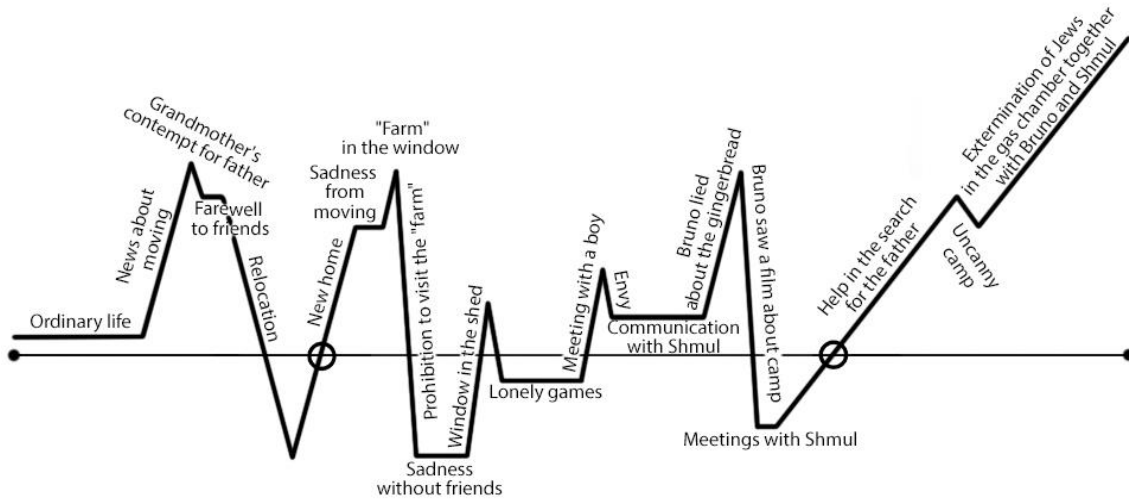


Fig. 3. Analysis of the tempo-rhythm of the film "The Boy in Striped Pajamas"[stud. Rozbytka A., Makukh N.]

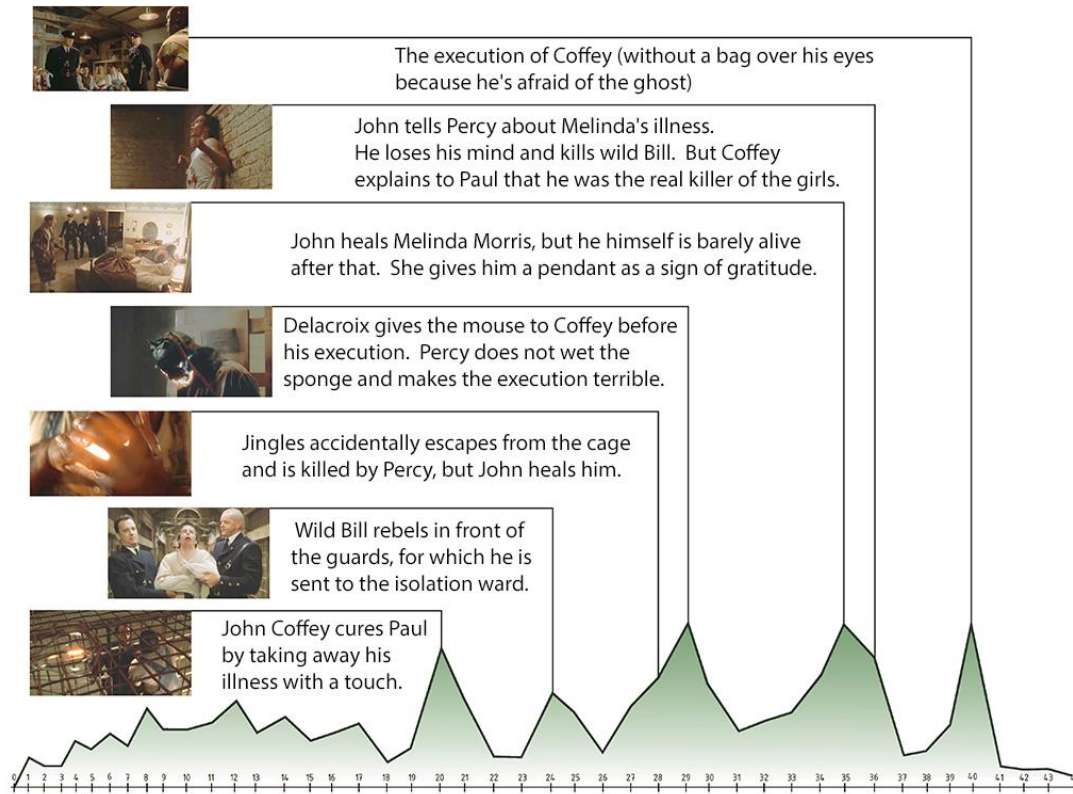


Fig. 4. Analysis of the tempo-rhythm of the film "The Green Mile"  
[stud. Galaiba K., Dukelska A., Osadchuk I., Polishchuk A.]

The obtained results were reflected in the graphs, where the highest and lowest points indicate the speed of development of the plot and the change of its turning lines. In the future, this will be reflected in the frequency of changes in the viewpoints of the future park (Fig. 3, 4).

*The third stage. Analysis of emotions.* The next task for students is to analyze the emotions that evoke scenes and episodes of the film in the viewer. To accomplish this task, you need not only to watch the selected film, paying attention to your feelings in each of its parts, but also in general, to immerse

yourself in psychology – to learn what "emotions" are, under what influence they arise, how long they last and how they are interpreted and are classified by specialists. Since this knowledge is basic in psychology, the students needed one lecture in psychology to cope with this stage.

The analysis of emotional states that occur during the viewing of various episodes and scenes, students depicted graphically, as in previous stages. First, in the form of simple lines, and then - in the image of possible plans of the spaces of the environment.

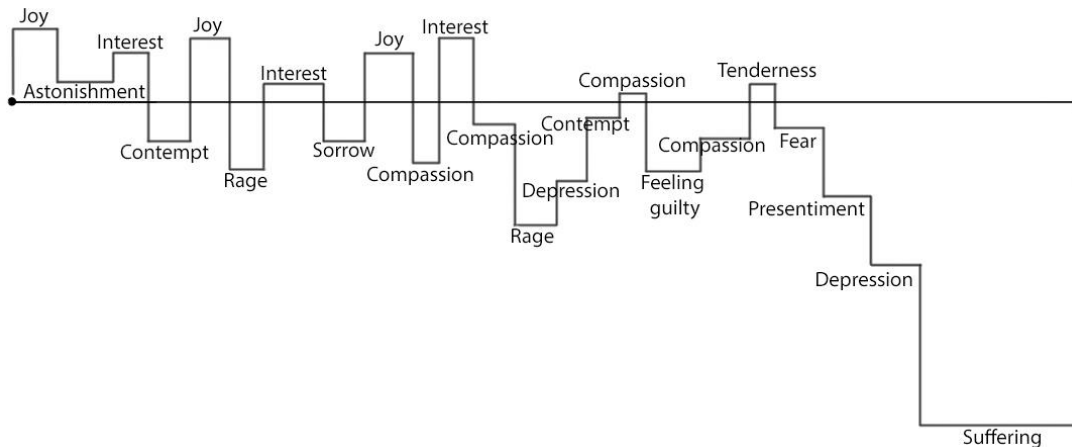


Fig. 5. Analysis of emotional states that causes the film "The Boy in the Striped Pajamas",  
[stud. Rozbytska A., Makukh N.]

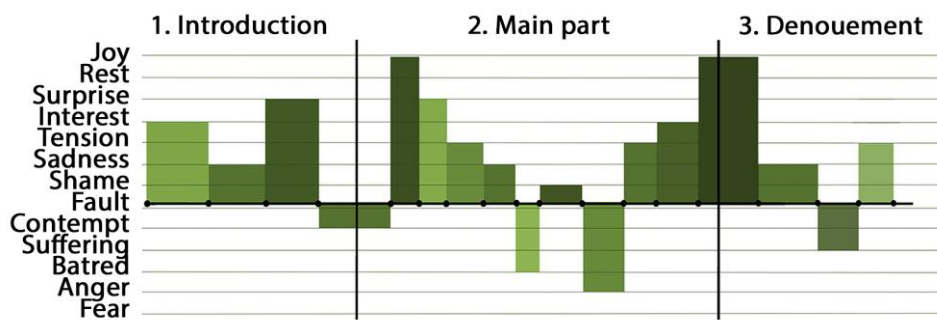


Fig. 6. Analysis of emotional states that causes the film "The Green Mile" in the viewer  
[stud. Galaiba K., Dukelska A., Osadchuk I., Polishchuk A.]

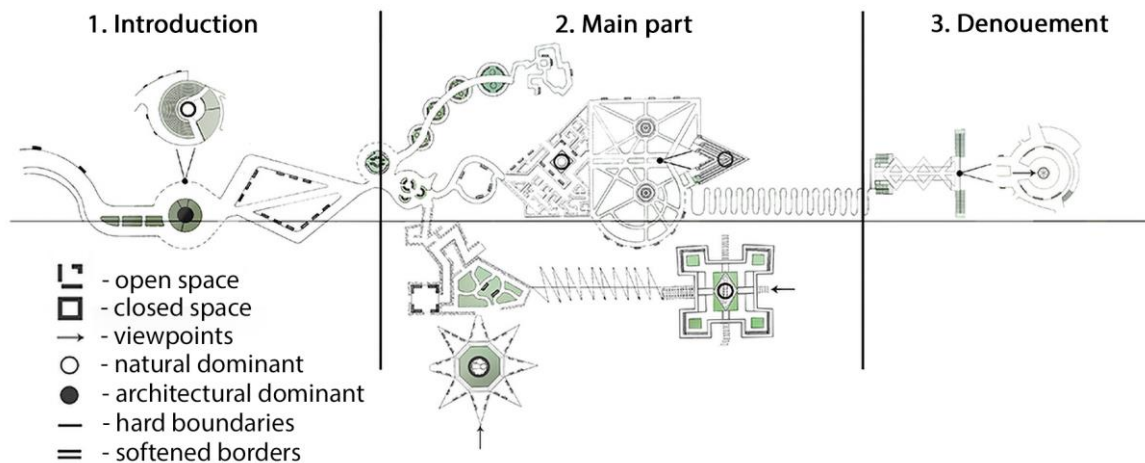


Fig. 7. Graphic script for the movie "Green Mile"  
[stud. Galaiba K., Dukelska A., Osadchuk I., Polishchuk A.]

Student work shows that there is a horizontal line, a kind of zero (absence) of emotions. Above it are emotions, which are usually interpreted as positive, and below - negative. It should be noted that the greatest amplitude of emotions, their burst is observed between the first and second turning points of the script, according to the paradigm of S. Field cinema, in the second act, where the plot is confronted, as shown in Figures (Fig. 5, 6). In the future, this will correspond to the main part of the park and will largely determine its function.

The fourth stage. Graphic writing of the park script. The final stage of the analytical part of the task is the graphic "writing" of the script of the park based on the analysis of the script of the selected film. In accordance with the emotions that evoked certain scenes and episodes of the film, students search for relevant fragments of the environment. It is known that anxiety and feelings of hopelessness are caused by closed spaces with high opaque fences, and open lawns on the contrary, cause joy and positivity. Sadness in the landscape composition



is caused by an alley of weeping willows - a rhythmic directional space is fixed, and the hope for a "happy end" is a circular viewpoint on the elevated relief, and so on. etc.

In general, this search for the relationship between the environment and human emotional states correlates with the well-known study by Gehl, Jan [6] on the boundaries of space (hard, soft, soft) and their impact on humans. As a result, all notions of space and its impact on human emotions are reduced to graphic images, as in Fig. 7. Thus, at the end of this stage, students get a graphic expression of the scenario of the park, which was based on the paradigm of cinema S. Field. Now it was possible to move from the analytical part to the direct design of the park, which was the next step.

*Fifth stage. Park design.* After the preparatory theoretical work, students begin designing the park. One of the main tasks at this stage is to determine the functional type of the park, which depends on the genre of the film and to develop its main idea in accordance with the written script. Some analytical schemes of the park affect the emotions that the authors evoke with landscape compositions, in accordance with the plot of the film.

In general, the composition of the park area already at this sketch stage, fully corresponds to the plot structure of the selected films. Thus, the scheme of the park plan based on the script of the film "Boy in striped pajamas" fully traces the geometric structure with many sharp corners, which corresponds to the essence of the film with its keen feelings, military themes and constant danger (Fig. 8). At the same time, in the scheme of the park according to the film "Green Mile" we see a branched structure with many independent elements, which corresponds to several story lines of this scenario, often confusing and understandable only with its development (Fig. 9).

In all cases, the park area was divided into the main parts derived by S. Field in its paradigm: the main entrance corresponded to the string; the main part - the main functional areas of the park, the culmination - the main architectural or natural dominant; interchange - the exit is usually located on the opposite side of the main entrance. Depending on the pace of the film, the number and frequency of episodes and scenes in the park, other dominants and viewpoints were designed. Compositional axes indicated the main and secondary scenario directions of composition development.

In general, to create in the park environment of spaces that evoke emotions, according to the script of the selected film, students operate with such concepts as: space (open, closed, semi-open, semi-closed); boundaries of space (hard, soft, soft, according to Jan Gehl, [6]); species points; dominants (architectural or natural), places of passion,

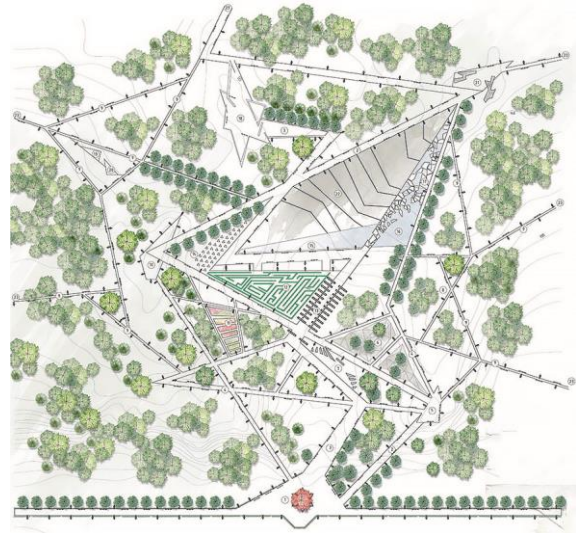


Fig. 8. Fragment of Project of Memorial Park  
[from author's private archive]

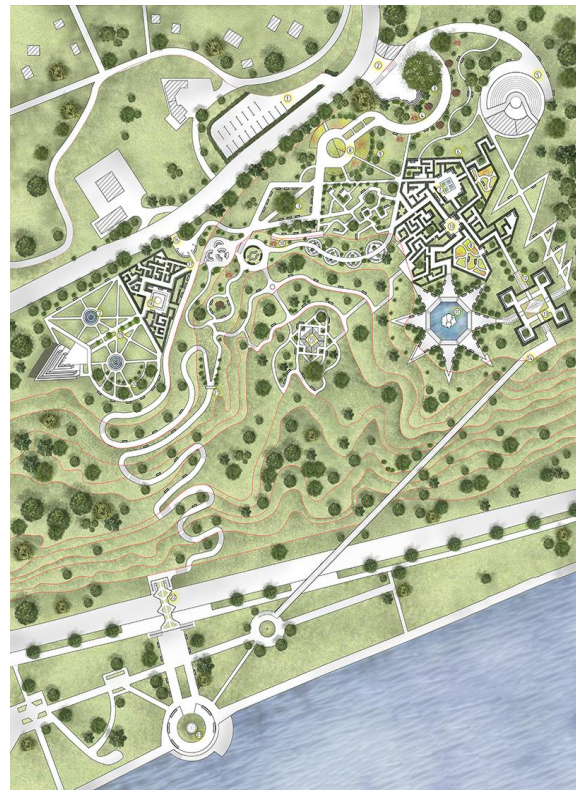


Fig. 9. Fragment of Project of Walking and Adventure and  
Mystical Park [from author's private archive]

boredom, anxiety and reverence (according to K. Ellard [3]), etc. Thus, the films. The genres of these films, their tempo-rhythm and emotions that evoked episodes and scenes were reflected in the choice of theme and functional type of parks ("memorial" - in the case of the script for "The Boy in Striped Pajamas", "walking-adventure and mystical"). "In the case of the script of the film" "The Green Mile", their landscape-spatial structure and plant composition, as well as in the composition of construction and disclosure of architectural space from the projected viewpoints.

The territory chosen for the design of the park is currently free, although it is located in the center of Kyiv. In this case, the design of the parks "from scratch" made it possible to idealize the situation, to work without any restrictions, focusing only on the analysis of the selected film, the study of its structure and tempo, the analysis of the emotions that arise when viewing its parts, as well as on the graphic writing of the park's architectural scenario and its design. The main task is to determine the turning points - "hooks" in which the programmed emotions and landscape composition should change in accordance with the script of the selected film. This corresponds to the structure of the film script - every second the viewer should be interested in what will happen next. In the park, the visitor should be interested in what he will see when he walks forward or turns onto another path.

While working on projects, students learned to manipulate space, expanding or compressing it, thereby creating such compositions that force visitors to speed up or slow down their movement regardless of the mode of movement - on foot, bicycle, scooter, etc.

Also, the study does not take into account the peculiarities of the perception of the environment by people of different age categories and viewing angles, which are characteristic of people of different heights, as well as the perception of the environment by smell and taste. It is believed that these questions are the subject of a separate study. The results of previous studies devoted to scenario modeling of the environment of historical city centers in order to create an interesting tourist route, for example, N. Morgun, & L. Reznitskaya, A. Skopintsev [16] used not a cinematographic, but a theatrical scenario, i.e. the main ones were static urban situations with a set of mise-en-scenes. This is also a manifestation of a certain "ideal" situation, designed for the static nature of not only the material objects that fill the urban environment, but also the static perception of the environment by a person. Thus, scientific research using cinematographic methods of scenario building in the existing urban environment is legitimate and needs further improvement.

## Conclusions

Thus, the article develops and describes the process of designing a park space by the method of cinematic scenario, so it is possible to draw the following conclusions:

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In the process of research the legitimacy of using the methods of visual arts for research, description and design of the architectural environment is proved, thus continuing and deepening scientific research in the field of art synthesis. It is determined that the most suitable method of "writing" the script of the architectural environment is the method of cinematographic scenario, due to the mobility of both people (characters) in space and the movement of the camera, and this is most consistent with the real situation body in general and eyes in particular.

The expected result of the work performed during the study of the discipline "Landscape Architecture" are projects of parks for various functional purposes. The peculiarity of the method is the use of screenwriting tools, which are based on the film paradigm S. Field. Her slogan "every moment the viewer should be interested, but what will happen next?" fully meets the modern requirements of the human spectator (consumer) to the architectural environment, which is formed under the influence of the growing visuality and entertainment of modern urban life.

According to the S. Field paradigm, in all projects the park area was divided into main parts: the string, which corresponds to the main entrance; the main part is the main functional areas of the park; culmination - the main architectural or natural dominant; junction - the exit is usually located on the opposite side of the main entrance. Depending on the tempo-rhythm of the film, the number and frequency of episodes and scenes in the park, other dominants and viewpoints were designed, and the functional type of the park was determined. Compositional axes indicated the main and secondary scenario directions of composition development.

During the approbation of the film script design method, it was found that the programmed emotions of the spectator (park visitor) can be evoked by manipulating the space and its boundaries, which are created in the landscape as natural and artificial materials, elements and objects.

We assume that this method of cinematic scenario can be used in the design of the architectural environment of the city, as a new part of it (urban quarter, neighborhood, and district) and in adjusting the existing historical environment. All this requires further research and testing in project practice.

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**Kopsavilkums.** Rakstā aprakstīta un analizēta kino scenārija rakstīšanas metodes izmantošanas iespēja parka telpas dizainā, un tas ir parka dizaina mācīšanas metodes tests ar scenārija un rezultātu vispārināšanas metodi. Autori analizē šīs metodes izmantošanas iespējas pilsētas esošās arhitektoniskās vides faktiskajā projektēšanā un salīdzina rezultātus ar kolēģu rezultātiem no citas arhitektūras profila izglītības iestādes līdzīgu uzdevumu veikšanā. Raksts pierāda, ka arhitektoniskās vides analīzei un tās uztveres scenārija rakstīšanai vispiemērotākais ir kinematogrāfiskais, nevis teātra scenārijs. Sida Filda filmu paradigma, kas balstīta uz Sida Filda filmu paradigmu, ir balstīta uz saukli "Katru brīdi skatītājam vajadzētu būt ieinteresētam, kas notiks tālāk?" mūsdienu pilsētas dzīvē. Līdz ar to saskaņā ar scenāriju parka teritorija ir sadalīta funkcionālajās zonās, no kurām katra atbilst kino elementiem. Tāpat kā filmā, katra parka daļa raisa noteiktas emocijas, kuras jau iepriekš ieprogrammē dizaineri. To var izdarīt, manipulējot ar telpu un tās robežām. Autori ierosina šo kinematogrāfiskā scenārija metodi izmantot pilsētas arhitektoniskās vides, kā jaunas tās daļas (pilsētas kvartāla, apkaimes un rajona) projektēšanā un esošās vēsturiskās vides pielāgošanā.

# Landscape architecture design as an art creative practice: A studio teaching model

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**Abstract.** Landscape Architecture is defined as a blend of art and science. However, it has been acknowledged that configuration of design forms, which is related to spatial composition and element forms is the most challenging design aspect that the students face in learning the design process in the basic design course. This is not the case for the scientific aspects where students can establish their ability and confidence in learning landscape technical issues and functional requirements. This paper discusses the outcomes of the first Landscape Architecture Design Studio at the Department of Landscape Architecture at Imam Abdulrahman Bin Faisal University (IAU), which represents the first foundation stone for Landscape Architecture design education. The Landscape Architecture Studio has examined the role of creative practice in art plays in the landscape architecture design process in the light of Zangwill's Aesthetic Creation Theory (ACT), and following the Form-Based Design (FBD) approach process defined by Stefano Fillipi. In this studio, students were asked to design a private garden related to, hypothetically, an artist's family house. Based on the FBD approach, each student chose a specific modern artist, supposedly owning the garden house, and studied his artistic principles of forms, patterns, colours and composition, and used them as an inspiration for their own art paintings. The students' art pieces acted as the basis for conceptualising their design preliminary plans and 3D images. As a result of this studio, students showed a great interest in the studio artistic approach, and demonstrated a significant ability to translate the artistic principles and qualities existing in creative painting successfully into their landscape architecture design. At the end of the teaching process, a reflective student survey feedback from instructors indicated that students had learned about the aesthetic creative approach and were able to understand the role non-aesthetic properties played into manifesting the design aesthetic quality.

**Keywords:** Landscape architecture design, aesthetic creative theory, art creative practice

## Introduction

Landscape architecture is a profession 'rooted in an understanding of how the environment works and what makes each place unique. It is a blend of science and art, vision and thought.' [8]. Communication between landscape and art has taken various shapes for centuries and contributed to the formation of our environment. This relationship has gone through various phases, starting from the modern era, during the first half of the twentieth century, when landscape architecture was recognised as a profession in 1925, and modern art became a source of inspiration for landscape architects. During the 1960s and 1970s, combined with the increased awareness of environmental and ecological problems, art took new forms toward Earth Art, Nature Art, Environmental Art and Reclamation Art in which landscapes became the materials and medium for the art works. The interdisciplinary relation between art and design has emerged in the last 20 years as the two fields developed a "symbiotic dialogue", influencing each other equally, unlike the relationship in the modern and post-modern periods [5].

This dialogue between Art and Design has been embraced in many professional projects throughout the history of landscape architecture. The Goldstone garden, designed by Garrett Eckbo in 1948, is a great

example of how two overlapping systems interlaced to create an imaginative and stimulating design, inspired by Kandinsky and Moholy-Nagy and their playful composition of geometric forms and dynamic line (Figure 1). Another contemporary example is an office courtyard in Saint-Denis, France, designed by Laure Quoniam Landscape Architect. Her design was an interpretation of one of Jackson Pollock's paintings, which opened the opportunity for surprising effects, both in terms of the line plan and in the composition of its materials [7] (Figure 2).

This paper discusses the outcomes of the first Landscape Architecture Design Studio at the Department of Landscape Architecture at Imam Abdulrahman Bin Faisal University (IAU), which represents the first foundation stone for Landscape Architecture design education. The studio examined the role creative practice in art plays in the landscape architecture design teaching process in the light of Zangwill's Aesthetic Creation Theory (ACT), and following the Form-Based Design (FBD) processes. Students were asked to embrace the artistic creation approach to produce their own paintings which acted as sources of inspiration for their design concepts. Their design work outcomes, observed by the instructors of this and next design courses, together



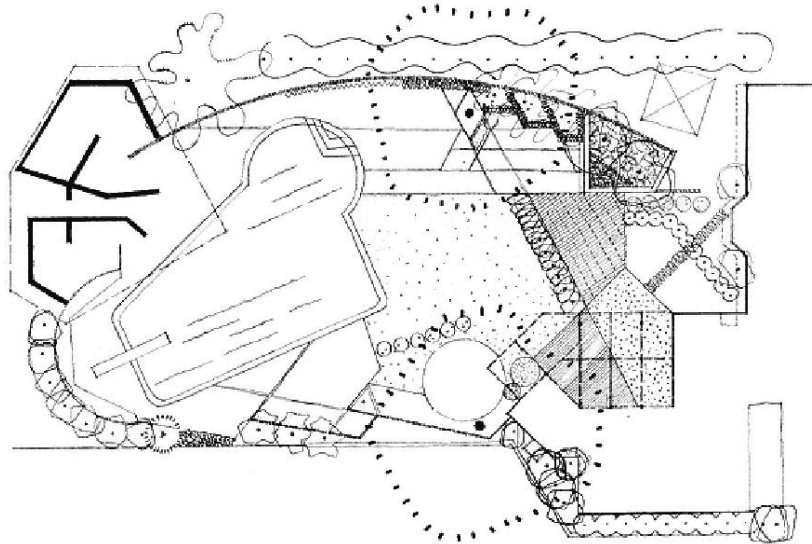


Fig. 1. Goldstone Garden designed by Garrett Eckbo [12]

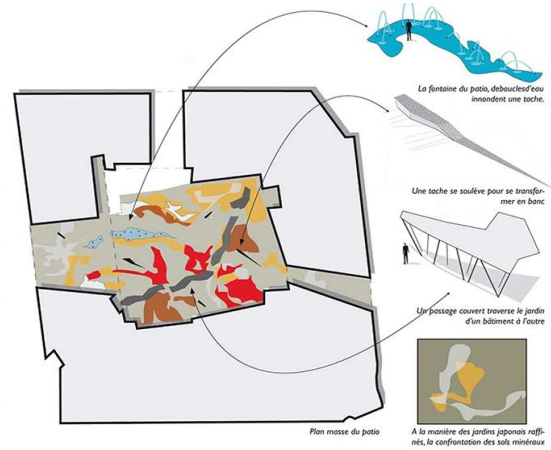


Fig. 2. Jackson Pollock's Office Garden by Laure Quoniam [7]

with the reflective survey results, showed evident improvement in students' intellectual and practical skills, and the way they understood basic design principles and process.

### The Philosophical and Theoretical Framework of the Studio Approach

The integration of art into the design process, in addition to the physical and spatial configuration of landscape spaces, is considered of great importance in the first stage of design learning [1]. When working in the introductory design studio, students tend to easily understand and learn the functional and technical design principles. However, they have difficulties in composing the forms of the design elements (landscape spatial art), and spatialising the 'program requirements' [3]. In the design studio in this study, the instructors asked the students to design a private garden as part of a property hypothetically owned by an artist from the modern art movement era. The required technical information in addition to the design program was easily gathered and researched through a series of case studies and site visits. This paper will focus on

the design forms and artistic compositions and how these were developed by the students throughout their first landscape design project. Abstract art was chosen as a source of inspiration due to its minimal nature that depicts imaginary portrayals which can represent yet differ from the real world. Students were asked to use hand drawings only in their design presentation in order to complement the artistic nature of the course and give them the chance to develop their artistic skills.

The philosophical foundation of this current studio project was based on Zangwill's Aesthetic Creation Theory (ACT) which considers landscape architecture as an art, which serves the function of the sensorial pleasure. According to van Etteger et al. "landscape architectural discourse has tended to eschew ideas of aesthetics in favour of notions of functional and sustainable design" [13]. However, conceptualising landscape as art does not undermine the functional design, but rather serves both aesthetic quality and practical and functional requirements. The process steps that this design studio followed were based on the Form-Based Design (FBD) approach developed by Fillippi et al.,

which involves considering and re-structuring the Function-Behaviour-Structure Framework which favoured user's needs and functions over aesthetic components [2].

### **Zangwill's Aesthetic Creative Theory**

The term aesthetic refers to sensory perception or sensuous knowledge. However, its meaning was changed in the nineteenth century by the philosopher Baumgarten to "gratification of the senses or sensuous delight" [5]. Since art is produced to satisfy our senses, particularly our vision, this notion has been applied to all aspects of the experience of art. Hekkert argued that this experience could be divided into three levels: aesthetics, understanding, and emotional levels, which can be conceptually and independently studied [5]. This current study focused on the first level of the art experience: the aesthetics, and how they contributed to the levels of understanding and emotion.

The current studio's philosophical foundation was based on the Aesthetic Creation Theory (ACT) developed by Nick Zangwill [15], which considers landscape architecture design a product of art. This theory, as a contribution to the aesthetical discourse of landscape architecture, was analysed by van Etteger et al. [13] in their study to identify the imbalance this profession has shown in favour of the science and rationality over ideas of aesthetics. ACT follows Monroe Beardsley's study (1958/1981) which is the first "systematic and critically informed art philosophy in analytic tradition" [14]. Zangwill [15] argues that Art is considered a form of artefact that is made by humans for a certain purpose, and is thus considered functional. He states: "Something is a work of art because and only because someone had an insight that certain aesthetic properties would depend on certain non-aesthetic properties; and because of this, the thing was intentionally endowed with some of those aesthetic properties in virtue of the non-aesthetic properties, as envisaged in the insight" [15] (Table 1). Art works function as an aesthetic pleasure source; so does landscape architectural design.

### **Form-Based Design Approach (FBD)**

Design form is strongly related to the aesthetic pleasure of the human visual experience of the environment, and is the visible shape or configuration of something and the particular way in which something appears or exists [9]. According to Malloy, "Form can also be used to refer to the shape, appearance, and the arrangement of those materials, in other words, the entirety of the visual elements used and the way they are assembled. In design and the visual arts, form is a synthesis of all the visual aspects of a work and, through it, we are able to perceive that work" [10]. Form is the container of

the product separable from its structure and materials, within which its affordances exist, referring to the nature of the relationship between the users and the product [2].

The process of the Landscape Design Studio followed the Form-Based Design (FBD) approach, defined and discussed by Fillippi et al. [2], which challenged the creative ideal of 19th and 20th century architecture and industrial design that "form follows function". One of the design schools whose members stressed the importance of function in the design process was the Bauhaus. Gropius, the founder of the Bauhaus school, wrote "the Bauhaus is seeking - by systematic practical and theoretical research in the formal, technical and economic fields - to derive the design of an object from its natural functions and relationship" [2]. The same view was stressed by Mies van der Rohe "every how is carried by a what" [11].

The Function-Behaviour Structure framework (FBS), which was initially developed by Gero and Kannengiesser [4], was defined by Fillippi et al. as "... a conceptual scheme that generalizes and organizes heterogeneous groups of entities and processes to begin and continue design activities" [2]. Accordingly, FBS can describe the design process through five variables: Function (F), which is the purpose of the product, Behaviour (B), which is related to the affordances, or what the product does, Structure (S), which describes the relationship between forms and what the product is, Need (N) which analyses the desirable and undesirable situations of the product, and finally Requirement (R), which is related to the product's properties to achieve a certain need. There are three spheres within which these variables exist: the external sphere (e), representations outside the designer's world; the interpreted sphere (i), concepts and experiences imagined by the designer; and the expected world (ei), where the impact of the "designer's actions" are imagined based on the current state of the external world. The five FBS variables (F, B, S, N and R) undergo several processes, combined with the framework's three spheres.

Unlike the FBS framework which has functions as a starting point, the Form-Based-Design framework (FBD) aims at arousing sensorial experience between the users and the landscape place. A sensorial experience is "the entire set of effects that is elicited by the interaction between a user and a product, including the degree to which all our senses are gratified (aesthetic experience), the meanings we attach to the product (experience of meaning), and the feelings and emotions that are elicited (emotional experience)" (Hekkert, 2006). As an exploitation of the FBS framework, Fillippi et al.

TABLE 1

Properties of Zangwill's Aesthetic Creation Theory [13]

AESTHETIC CREATION THEORY (ACT)				
AESTHETIC PROPERTIES		NON-AESTHETIC PROPERTIES		
Evaluative Properties	Substantive Properties	Physical Properties	Sensory Properties	Semantic Properties
e.g. Beautiful Ugly	e.g. Sad Wonderful Passionate	e.g. Size Pattern Shape	e.g. Sound Texture Colour	e.g. Narrative Meaning

highlighted the six stages of the Form-Based Design approach "FBD":

- **P1** (FOe) Form analysis: The study of the forms, their composition, patterns, texture, etc. described by Zangwill in his Aesthetic Creation Theory as the "Non-Aesthetic properties" which can be studied based on their affordances toward the "Aesthetic Properties";
- **P2** (Nei) Analysis of user's need, where the user's needs are used to generate design solutions;
- **P3** (Se) Prototype generation: This is about generation of the prototype, starting from the results of P2;
- **P4** (Si→Bi→Fi→Fei) Prototype exploitation, which includes evaluating the prototype based on user's satisfaction. Functions are considered the focus of this stage;
- **P5** (Bei→Fei→Sei→→Ps) Documentation: This stage includes the transformation of the expected functions and behaviours to design specifications;
- **P6** Revision: This stage includes the revision of the structure, behaviour and functions in the case of any unsatisfactory design solution. This can be related to our current study through the process of post-design user's consultation or the final virtual reality presentation to the client.

#### The Design Studio Results:

First-year design education is considered the milestone for developing a design approach, language and skills for students which can be used throughout their academic and professional career. Out of these design skills, visual experience plays a great role in forming the designer's style related to spatial configurations based on abstract forms, patterns, texture and colours. The current studio process constitutes eight main design stages, illustrated in Figure 3:

#### The Stages of the Design Studio:

The authors of this study, who were also the studio tutors, played an influential role, first by introducing each design stage to students by means of a visual presentation, and then by providing a list of relevant material sources. This helped enrich the

students' knowledge and visual library, as well as strengthening their intellectual background in terms of the different design aspects. Moreover, prior to embarking on the stages of the design process, the tutors highlighted the purpose of this studio, focusing on a small-scale landscape design project, and explaining the importance of approaching landscape design as an artistic creative practice. This included employing artistic principles and properties, such as forms, colors and patterns as design-driving forces and inspirations. Hands-on interventions by the tutors were offered, although only occasionally, depending on complexity of the artist's philosophy and artwork selected.

The following studio stages were generally applied to all students' projects. However, the lengths and order of the stages were adjusted by the tutors, based on each individual project (i.e. complexity of the art-work), and the student's level and skills. After each stage, the students' works were evaluated and graded during a jury session, in which feedback comments were reported and advice given for improving the work. Furthermore, of particular importance to highlight here is that adopting such an interactive design studio strategy, particularly in the early levels of landscape design education, has helped to raise levels of mutual trust between the students and the tutors.

#### Stage 1: Selection of the Artist

In The first stage of the design project students were asked to choose an artist from the modern art movements, particularly the abstract art movements such as Constructivism, Cubism, Orphism, Neoplasticism, and Suprematism. Abstract art movements were chosen for their use of minimal shapes, strong colours and distinctive patterns and lines, which can be easily applicable on landscape design layout. Students were given the chance to choose an artist from a list prepared by the instructors, or any artist they liked. Certain criteria for selecting the artist were explained to the students, which were not purely based on their subjective preference or taste: The artist's style should be selected for its tangible shapes, forms, patterns, lines, colours and compositions, which could act as a driver for generating the landscape

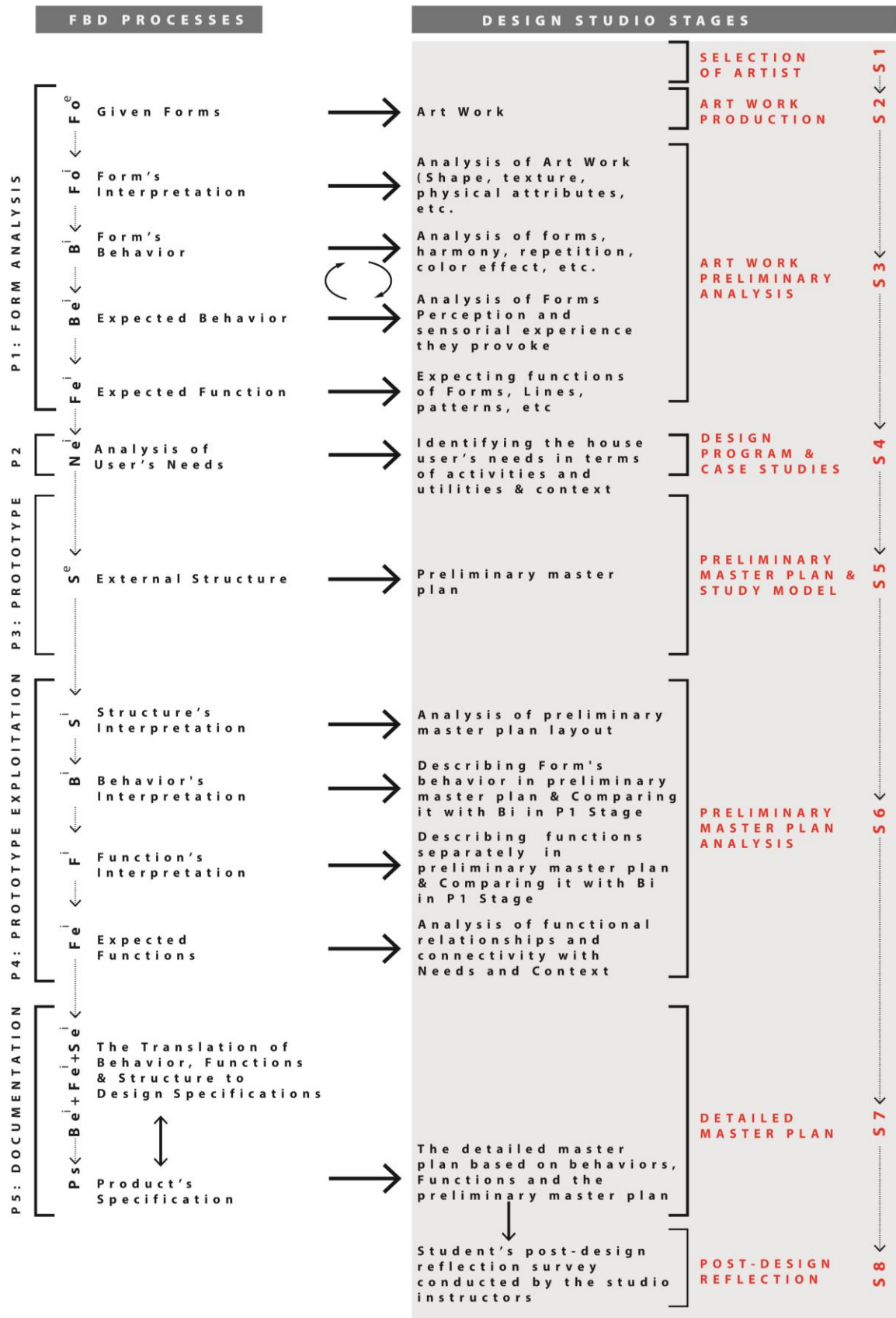


Fig. 3. Outline of the studio structure in parallel with the FBD system processes [created by the authors]



## sophie taeuber-arp



### Profile :

Born in 1889, in Switzerland, the daughter of a pharmacist, the family moved to Germany when she was two years old. Some years later she began attending art schools and moved back to Switzerland during the first world war. At an exhibition in 1915, she met for the first time the German-French artist Hans/Jean Arp. It was during these years that they became associated with the Dada movement, which emerged in 1916, and Taeuber-Arp's most famous works – Dada Head – date from these years. They moved to France in 1926, where they stayed until the invasion of France during the second world war, at the event of which they went back to Switzerland. In 1943 she died.



### Principles :

1. Curvilinear lines make closed shapes.
2. Overlapping lines that make square polygons.
3. Fill in overlapping areas with colors.
4. Colors :  
Black, Pink, Yellow, Blue, Green, Grey, Orange .

## Robert DELAUNAY

### History of The Artist:

Robert Delaunay, (born 1885, Paris – died 1941), French painter who first introduced vibrant color into Cubism and thereby originated the trend in Cubist painting known as Orphism.



### Art Movement And style:

Noted for its use of strong colors and circles shapes. His painting known as ORPHISM.

### Reasons for Choosing This Artist:

I liked his formation of circles, and the way he chose strong colors, the contrast between the colors, and the way he chose the contrasting colors.

### Projects That I Inspired From:



Noted for its use of strong colors and geometric shapes. His key influence related to bold use of color and a clear love of experimentation with both depth and tone.

Fig. 4. Two examples of artist selection [created by the authors]



Fig. 5. Two work samples of students' art paintings [created by the authors]

design. The given list of artists included: Piet Mondrian, Kazimir Malevich, Wassily Kandinsky, Robert and Sofia Delaunay, Theo Van Doesburg, and Sophie Taeuber-arp.

After choosing the artist, research about his/her background, art movement and style was carried out. This helped students to identify and immerse themselves in the creative principles and the characteristics of the art works in relation to the various aspects of the art movement the artist belonged to. The purpose of this investigation was intended to justify the student's decision to choose a certain artist and artistic style (Figure 4).

### Stage 2: The Student's Art work (FOe):

This stage is equivalent to the FOe (the given form) of the Form-Based Design System (FBS), which will be treated as a given form at the beginning of the design process. In this phase, students started producing their art works based on the artist's style they chose in stage 01. The analysis of the selected artist's art works (in terms of forms,

patterns, line, colours and composition) played a big role in determining the non-aesthetic properties of the new student's art works (Figure 5).

### Stage 03: Preliminary analysis of art work (FOi→Bi→Bei→Fei):

This stage coincided with the FOi→Bi→Bei→Fei (interpretation of form, interpretation of behaviour, expected behaviour and expected functions) of the form-based design system. In this step, students started analysing the non-aesthetic properties of the produced art work. Interpretation of form constitutes describing shape characteristic, types and proportions before determining their behaviour, grounded on their visual properties. Expected behaviour and functions means the expected artistic forms' performance in relation to the landscape design elements of the house and the garden; for instance, a long shape can act as a water feature (function) which can direct people and emphasize movement (behaviour).

### Stage 04: Analysis of users' need (Nei):

The study of the user's needs in landscape architecture design is fundamental to satisfy the practical requirement of any project. Design needs to be practical in order to be usable. User's need does not only include the needed activities on site, but should also be related to psychological needs (i.e. emotions and feelings) triggered by the design atmosphere. This process was equivalent to process P02 of FBD. In this stage students were first asked to analyse the supposed potential needs of the garden's users: what a small family that consists of a father, a mother and two children need in their garden. Moreover, what the house owner, as an



Fig. 6. Two examples of students' study models  
[created by the authors]

artist, needs in their garden was also considered when studying the garden site. Similar case studies were analysed in relation to proposed functions, design layout, spatial configuration, landscape elements, and functional relationships. This helped students to develop their own design program for the garden. The aim of analysing the case studies was to establish a visual library and motivate the analytical mind, and thus to extract the lesson learnt about the site users, circulation, environment and elements, which would inform the future landscape design (Figure 8). In addition to identifying the user's needs, the project site was surveyed and analysed, based on the site inventory and analysis techniques students had learned in this studio and previous design related courses.

**Stage 05: Preliminary masterplan and study model (Se):**

This was the first stage in formulating design layout using the art work produced, studied and analysed in the previous stages. This was conducted in parallel with the prototype process (Se) / external structure of FBD, where students started drawing their preliminary masterplan and the generic design layout of the garden (Figure 10). The first step in this stage is tracing the main lines of the art work around the pre-designed house located on the project site and given in the design brief, where students produced their first concept plans. The final concept version was the result of several sketches using the general shapes of the painting to draw the design lines while students attempted to conceptualise the spatial configuration of the garden together with the help of the study model (Figure 6).

**Stage 06: Prototype exploitation (Si→Bi→Fi→Fei)**

In this stage, the preliminary masterplan was revised and updated. The first step is the description/interpretation of the main physical attributes of the external structure or the design layout. Students were encouraged to write down words that best describe their design, main forms, secondary forms, supportive lines (Si). Description could include the type of design forms, such as geometrical form, organic forms, straight line or

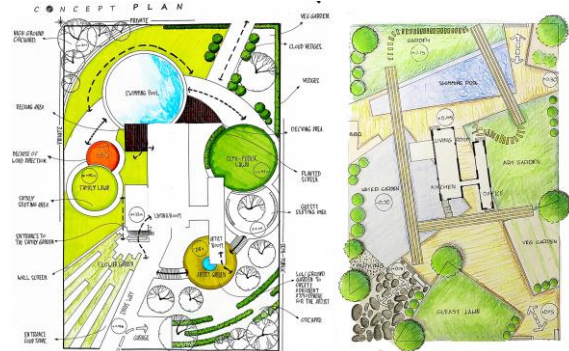


Fig. 7. Two students' work samples of preliminary masterplan exploitation [created by the authors]

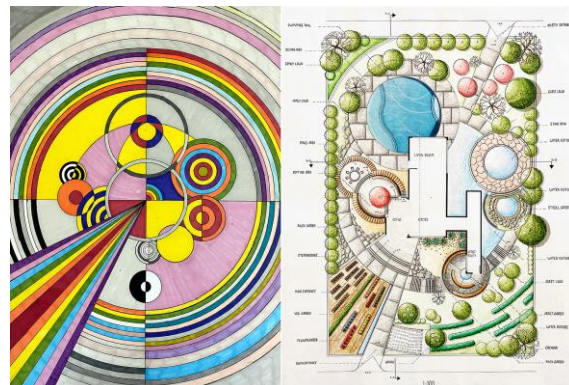


Fig. 8. A sample of a juxtaposition of the final masterplan and the student's original art work [created by the authors]



Fig. 9. A sample of a juxtaposition of the final masterplan and the student's original art work [created by the authors]

curvilinear. The second step was the interpretation of behaviour, the forms' performance and their spatial perception: i.e., the sense of direction, focal points, edge emphasis, and gathering spaces they created (Bi). This was followed by the interpretation of the functions (Fi) the forms could accommodate based on the design program developed in stage 4 of the users' needs analysis (Nei). Expected functions included re-defining the functions in relation to the house design, entrances, and pedestrian and vehicular circulation on the main site (Figure 7) Moreover, in this stage new functions were added to the garden site (Fei).



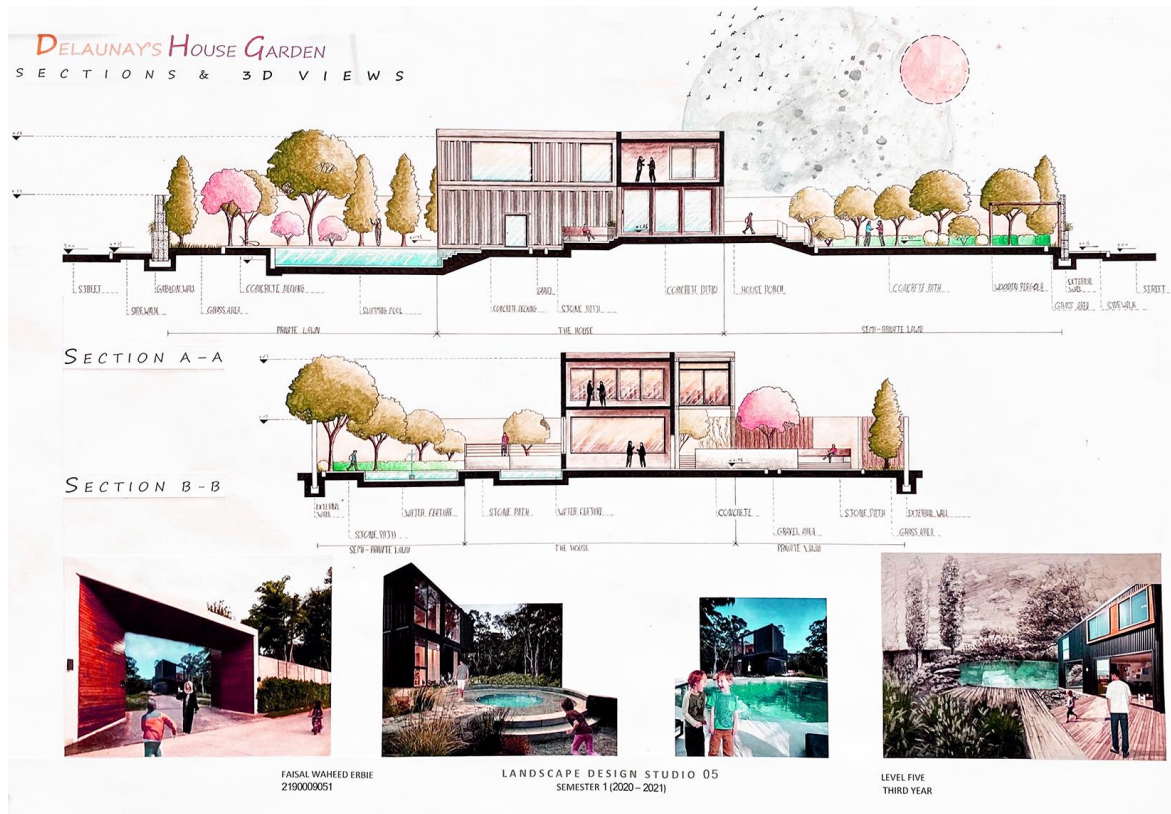


Fig. 10. An example of a student's sections and 3D collage works [created by the authors]

**Student Name (Optional):**

**Student Project's Name:** Klee's house garden

Please select words from the five categories in the table below that best describe your project (or you can highlight it in red). Please add more words in "others" if required, and words that describe the non-aesthetic properties of your final project design.

Aesthetic Properties		None-aesthetic Properties		
evaluative aesthetic properties	Substantive aesthetic properties	Physical Properties	Sensory Properties	Semantic Properties
<input type="radio"/> Beautiful	<input type="radio"/> Elegant	<input type="radio"/> Shape: <b>geometrical lines and angles</b>	<input type="radio"/> Colour:	<input type="radio"/> Meaning:
<input type="radio"/> Ugly	<input type="radio"/> Sad	<input type="radio"/> Size: <b>Space sizes are large</b>	<input type="radio"/> Sound: <b>The sound of the fountains gives a sense of relaxation</b>	<input type="radio"/> Symbolism
<input checked="" type="radio"/> Normal	<input type="radio"/> Passionate	<input type="radio"/> Pattern: <b>Lines</b>	<input type="radio"/> Smell:	<input type="radio"/> Story Telling
<input type="radio"/> Abnormal	<input type="radio"/> Awkward	<input type="radio"/> Composition: <b>Formal (Geometrical)</b>	<input type="radio"/> Touch:	<input type="radio"/> Others
<input type="radio"/> Wonderful	<input type="radio"/> Mysterious	<input type="radio"/> Informal (Organic)	<input type="radio"/> Others:	
<input checked="" type="radio"/> Good	<input type="radio"/> Disturbing	<input type="radio"/> Hybrid		
<input type="radio"/> Bad	<input type="radio"/> Dynamic			
<input type="radio"/> Superb	<input type="radio"/> Static			
<input type="radio"/> Acceptable	<input type="radio"/> Dreamy			
<input type="radio"/> Fascinating	<input type="radio"/> Emotional			
<input type="radio"/> Others:	<input type="radio"/> Simple			
	<input checked="" type="radio"/> Abstract			
	<input type="radio"/> Complex			
	<input type="radio"/> Joyful			
	<input checked="" type="radio"/> Boring			
	<input type="radio"/> Others:			

Fig. 11. An example of student's post-design reflection checklist [created by the authors]

**Stage 07: Documentation (Bei→Fei→Sei→→Ps)**

The final process of the studio was the documentation, which involved producing the final detailed masterplan, sections and 3D collages (Figures 8 to 10). This production was the result of the information and knowledge accumulated in the previous stages, incorporating the revised

understanding of forms, behaviour and functions and the final design layout. The forms of the landscape spaces were revised and reconsidered when students started analysing sizes of spaces and producing details and studying standards and materials (Figures 8-10). As part of this stage, students selected an area of around 400 square metres for their detailed action plans and sections in scale 1:50 and 1:20. These drawings showed the students' ability to study construction details and how materials could be selected, specified and configured. Additional layers were extracted from the main masterplan, such as a planting plan together with specification of trees and vegetation.

**Stage 08: Post-design reflection**

This stage was deliberately added to the FBD process of this studio by the authors. Obtaining their reflections on the design helped the students to reconsider previous ideas and thoughts produced during the design process and learn about the nature of design learning in connection with the design objectives. Students had not been informed with the learning theories underpinning this design studio until they finished the project final stage. This was to avoid any forced design solutions, conscious intentions and interventions, and let the design proceed systematically.

In order to identify the aesthetic properties and their relation with the non-aesthetic properties based

on the students' design outcomes, a survey was conducted. The design of the survey was grounded on Zangwill's definition of design properties stated in section four of this paper. Students were asked about the non-aesthetic properties that contributed to the aesthetic properties of the design. The survey produced interesting results in terms of how students described the aesthetic quality of the final results achieved by the landscape attributes, e.g. how using various types of geometries made the design mysterious and joyful. An example of the post-design reflection survey is presented in Figure 11.

## Conclusion

The introduction of art practice into the landscape architecture design studio was intended to stimulate students' creativity and critical thinking to produce a sensory and visually interesting garden design outcome. Students showed great passion and interest in the art application of landscape design from the beginning of the studio to the final jury presentation. Asking students to use free-hand sketches and manual drawings only stimulated the artistic skills of students, and complemented the hand drawing graphic skills and techniques they learnt in the landscape graphic skills course.

The aesthetic creative theoretical framework and the form-based design followed in this design studio proved a great success in guiding students throughout the design problem and the project landscape solutions in regard to both aesthetic quality and functional requirements. The studio outcome received an overwhelmingly positive response and appreciation from faculty members and students, both at departmental and college levels, and presented a new model in teaching landscape architecture design in the IAU. However, stage 05

was recognised as a challenging phase in developing interpretation of forms into expected behaviour and functions, when students literally translated the artistic form into landscape configuration without considering the context and user's needs. Thus, this study showed both the opportunities and the limitations of using art practice as a basis for landscape architecture design.

The art production process helped students understand the link between aesthetic and non-aesthetic properties of the landscape design, which was shown in the last stage of the post-design reflection. This approach proved efficient in improving student's design creativity, visual and other artistic skills. Throughout all design stages, except the last one, students were given the freedom to describe their design concept and attributes as they liked. This allowed them to develop their own descriptive words and interpret their intentions about their works. Finally, in stage 08, more formal definitions and terminologies were given, and links between meanings were established. Since this studio was the first landscape design course in the department, encouraging artistic creation was of great importance in highlighting the multidisciplinary nature of the profession, and creating the feeling of pleasure in the studio atmosphere. Moreover, the students of this design studio were observed in the next design course, and the instructors of both courses reported that they witnessed evident improvement, intellectually and practically, in the way the students developed their design concepts. Furthermore, the enjoyment and appreciation of applying this approach was extended to work-from-home due to restrictions during the outbreak of the COVID-19 pandemic.

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**Kopsavilkums.** Ainavu arhitektūra ir definēta kā mākslas un zinātnes sajaukums. Tomēr ir atzīts, ka dizaina formu konfigurācija, kas saistīta ar telpisko kompozīciju un elementu formām, ir vissarežģītākais dizaina aspekts, ar ko studenti saskaras, apgūstot dizaina procesu dizaina pamatkursā.

Tas neattiecas uz zinātniskajiem aspektiem, kuros studenti var pierādīt savas spējas un pārlicību, apgūstot ainavas tehniskos jautājumus un funkcionālās prasības. Šajā rakstā ir apskatīti Imam Abdulrahman Bin Faisal universitātes (IAU) Ainavu arhitektūras katedras pirmās Ainavu arhitektūras dizaina studijas rezultāti, kas ir pirmais ainavu arhitektūras dizaina izglītības pamatakmens.

Ainavu arhitektūras studija ir pētījusi radošās prakses lomu mākslas spēlēs ainavu arhitektūras projektēšanas procesā, ņemot vērā Zangvila estētiskās radīšanas teoriju (ACT) un ievērojot Stefano Fillipi definēto *Form-Based Design* (FBD) pieejas procesu. Balstoties uz FBD pieeju, katrs students izvēlējās konkrētu mūsdienu mākslinieku, kuram it kā piederēja dārza māja, pētīja viņa mākslinieciskos formu raksturu, krāsu un kompozīcijas principus un izmantoja tos kā iedvesmu savām mākslas gleznām. Studentu mākslas darbi bija par pamatu viņu dizaina provizorisko plānu un 3D attēlu konceptualizēšanai. Šīs studijas rezultātā studenti izrādīja lielu interesi par studijas māksliniecisko pieeju un demonstrēja ievērojamu spēju radošajā glezniecībā pastāvošos mākslinieciskos principus, un veiksmīgi pārvērta savā dizainā. Mācību procesa beigās studentu aptaujas atsauksmes no pasniedzējiem liecināja, ka studenti ir apguvuši estētiski radošo pieeju un spēj saprast neestētisko īpašību lomu dizaina estētiskās kvalitātes izpausmē.

